second edition

AN INTRODUCTION TO THE ARCHAEOLOGY OF Ancient Egypt

Kathryn A. Bard

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Abbreviations

AJA
American Journal of Archaeology

ASAÉ
Annales du Service des Antiquités de l'Égypte

BdÉ
Institut français d'archéologie orientale, Bibliothèque d'Étude

BIFAO
Bulletin de l'Institut français d'archéologie orientale, Caire

BiOr
Bibliotheca Orientalia

BSFE
Bulletin de la Société française d'égyptologie

CdÉ
Chronique d'Égypte

CRIPEL
Cahier de recherches de l'Institut de Papyrologie et d'Égyptologie de Lille

GM
Göttinger Miszellen

JARCE
Journal of the American Research Center in Egypt

JEA
Journal of Egyptian Archaeology

JFA
Journal of Field Archaeology

JNES
Journal of Near Eastern Studies

JRA

Journal of Roman Archaeology

JSSEA

Journal of the Society for the Study of Egyptian Antiquities

LÄ

Lexikon der Ägyptologie, W. Helck and W. Westendorf (eds.), Wiesbaden

LAAA

Liverpool Annals of Archaeology and Anthropology

MDAIK

Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo

MIFAO

Mémoires de l'Institut français d'archéologie orientale, Caire

NARCE

Newsletter of the American Research Center in Egypt

RdÉ

Revue d'Égyptologie

ZÄS

Zeitschrift für ägyptische Sprache und Altertumskunde

Preface

Ancient Egyptian civilization spanned over 3,000 years, and its prehistoric past was considerably longer. It is impossible to describe all of the primary archaeological evidence in any single book, but I hope that this text provides a useful foundation for studying the archaeology and culture of this remarkable early civilization.

I have been teaching courses on Egyptian archaeology at Boston University since 1988, and realized a long time ago that there was no one text that covered everything I wanted to teach in a comprehensive survey. This book now provides such information. In the first three chapters I examine the history of the field of Egyptology and Egyptian archaeology; archaeological theory and methods applied to the study of ancient Egypt; the study of the written language and scripts; the application of dating techniques and chronology; and the environmental setting, resources, agriculture, and animal husbandry. In the following seven chapters, I then present the main periods of Egyptian prehistory and pharaonic history. The chapters are arranged according to these periods because developments in pharaonic culture need to be understood from a chronological perspective, but the chapters can also be used selectively. My intent has been to cover the basics: everything I wanted to know about ancient Egypt when I began my studies.

Since textual information is so important for an understanding of this ancient society, relevant texts are briefly discussed in association with the archaeological evidence. In some cases the archaeological evidence includes excavations from the nineteenth and early twentieth centuries, as well as more recent investigations of the same sites. Important topics, such as the Neolithic, state formation and Egyptian kingship, the decipherment of Egyptian hieroglyphs, mortuary beliefs, and mummification and the study of human remains, are highlighted in boxes throughout the book. Information in boxes also includes specific types of analyses, such as ceramic and lithic analyses, and discussion of some particularly important sites and discoveries.

This book is not only designed for broad survey courses on Egyptian archaeology, but it also provides useful background information and references for more advanced study. For classroom discussions, chapter summaries and questions are provided. Readers interested in archaeology and anthropology (especially early civilizations), ancient history and art history, ancient Near Eastern studies, and biblical and classical studies will also find this book of interest.

Archaeology needs to be understood through illustrations – of sites, buildings, artifacts, etc. – and this book is illustrated with plans, drawings, photographs, and color plates. A glossary of terms used is included, as well as an extensive bibliography of books and articles in English. Since so much work has been done in Egypt by non-English speaking archaeologists, an additional reading list of references in French, German, and Italian is also provided.

Acknowledgments

The idea of the first edition of this book began as notes for my course at Boston University, the Archaeology of Ancient Egypt. Much of the book was written while I was on sabbatical leave in 2002–2003, and I would like to thank the Dean of the College of Arts and Sciences at Boston University for approving this leave so that I could spend the year writing and doing research at the University of Toronto. While in Toronto, Edward Keall, then Head and Senior Curator of the Near Eastern and Asian Civilizations Department of the Royal Ontario Museum, provided assistance in using the museum libraries. The late Nicholas Millet, with whom I first studied Egyptian archaeology, very graciously assisted me in the Egyptian Department library of the ROM. Larry Pavlish and Roelf Beukens gave me a very informative tour of the Isotrace Radiocarbon Laboratory at the University of Toronto and later provided information for this book on radiocarbon dating.

I am especially grateful to John Baines of the University of Oxford for all of his comments and assistance – and cheerful encouragement – which greatly helped to improve the manuscript of the first book. His encyclopedic knowledge of ancient Egypt and relevant references – and his readiness to provide not only information but also his prodigious insights – are much appreciated.

As the first book took shape, the late Bruce Trigger of McGill University provided support and encouragement – with which he had been so generous since he was on my PhD dissertation committee at the University of Toronto. I am grateful for the time and thoughtfulness that he put into reviewing the chapters of the first book – and his many helpful comments and suggestions.

Emily Moss of Harvard’s Tozzer Library was helpful with information about references in the book’s first edition. My Boston University colleague Chris Roosevelt cheerfully provided quick answers about terms in Roman archaeology. A long conversation with Jack Josephson in New York gave me helpful directions on what to focus on in the chapters on the Late and Greco-Roman

periods. For questions on Nubian archaeology, Andrea Manzo of the University of Naples “l’Orientale” – my colleague of so many field seasons in Ethiopia and Egypt – was helpful with references and knowledgeable insights. The many discussions I have had in the field with Rodolfo Fattovich, co-director with me of excavations at Aksum, Ethiopia, and Mersa/Wadi Gawasis, Egypt, have enriched my knowledge of fieldwork methodology, while at the same time not losing sight of the broader cultural context.

At Blackwell Publishing, Jane Huber provided enthusiastic support from the inception of the first edition of this book – and ongoing facilitation of what turned out to be a much bigger book than I had anticipated. In the process, Jane not only impressed me with her great skill as an editor/manager, but she also became a good friend. I am also grateful to Donald Ryan of Pacific Lutheran University for the idea of including a glossary of terms.

For the book’s second edition with Wiley-Blackwell, editor Rosalie Robertson was very helpful and encouraging throughout the long process of revising the earlier book and updating it with recent archaeological data. I am greatly indebted to Joyce Marcus of the University of Michigan, who put so much time and effort into reviewing the revised chapters and making many helpful suggestions for improvement. At Boston University, graduate student Allison Riley also helped with the list of websites of archaeological projects.

The end result of the second edition of this book is of course my own responsibility. Although there may be gaps in the evidence discussed because of the book’s very broad scope, I hope that it will be useful and informative as an introduction to the impressive remains of ancient Egypt.

As a child, I was taken to the Egyptian collection in the Field Museum in Chicago, where I saw a small faience amulet of a cat and her two kittens that filled me with a sense of wonder. That is where this book really began 50+ years ago – and the wonder of ancient Egypt is still with me.

Chapter 1

Egyptian Archaeology Definitions and History

Contents

1.1 Introduction: Ancient Egyptian Civilization and Its Prehistoric Predecessors

1.2 Egyptian Archaeology

1.3 Egyptology

1.4 History of Egyptology and Egyptian Archaeology

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1.6 Archaeological Theory

1.7 Ancient Egypt and Egyptian Archaeologists in Fiction and Films

Introduction

Ancient Egypt – the land of the pharaohs – is one of the oldest civilizations in the world. Its monumental tombs and temples, decorated with reliefs and hieroglyphs, have been the source of awe and admiration for millennia. Art and crafts of great beauty, and well-preserved organic evidence (especially mummies) have added to ancient Egypt's fascination. "How did they do it?" is a question often asked about the ancient Egyptians that has sometimes given rise to highly speculative and fantastical explanations. For example, it has been suggested that the Great Pyramid at Giza (built by Khufu in the 4th Dynasty), which was the largest structure in the world until the 19th century AD, could not have been built without the technological and mathematical knowledge of an earlier civilization – the fictitious lost continent of Atlantis. But there were no earlier civilizations anywhere in the world and such an explanation is based entirely on fanciful beliefs which do not credit the ancient Egyptians with the intelligence and ability to organize and carry out such a project.

A closer look at the archaeological evidence provides information about how the Egyptians built their monuments. At Khufu's pyramid there is evidence of rectangular cuts in the bedrock used by ancient surveyors, and the remains of pyramid construction ramps have been identified to the south of the three kings' pyramids at Giza. Evidence of ancient stone quarries at Giza has also been located. Graffiti naming gangs of workmen can still be seen on blocks used to build the pyramids, and are found in stress-relieving spaces above the burial chamber in the Great Pyramid.Tools for stone working have also been found on the site. Using systematic methodology, not fantasy, archaeologists who study ancient Egypt interpret archaeological evidence, providing a more rational, down to earth – and much more interesting – understanding of the past, including interpretations of "why they did it." The truth is often much more interesting than wild speculation.

1.1 Introduction: Ancient Egyptian Civilization and Its Prehistoric Predecessors

Ancient Egypt, with its unique monuments and works of art, has left very impressive remains. There is also a large corpus of preserved texts, which adds to our understanding of the cultural meanings of these works, and how this civilization functioned.

Ancient Egyptian civilization emerged between 3200 and 3000 BC, when a large region stretching along the lower Nile River and Delta was unified and then controlled by a centralized kingship (see 5.5). Its distinctive characteristics – the important institutions of kingship and state religion, monumental tombs and temples, the art which decorated these monuments, and hieroglyphic writing – emerged at this time and continued for over three thousand years, until Christianity became established throughout Egypt. Because of its great longevity, Egyptian civilization provides a unique opportunity to study the changes and developments of an early civilization over a very long span of time.

Civilization is a complex form of culture, the learned means by which human groups adapt and alter their physical and social environments. Before the Egypt of the pharaohs there were many earlier cultures, from the hunting and gathering societies of the Paleolithic (Old Stone Age) to the Neolithic, when agriculture was introduced in the Nile Valley ca. 6000–5000 BC (see 4.8). During the Predynastic Period, from ca. 4000–3000 BC, when there is evidence of different cultures in Upper (southern) and Lower (northern) Egypt, social and economic changes were taking place that would lead to the emergence of Egyptian civilization (see 5.1). While this book focuses mainly on the archaeology of ancient Egyptian civilization – pharaonic Egypt – an overview of Egyptian prehistory is crucial for understanding the particular type of civilization that arose there.

Dynastic Egypt was the almost 3,000-year time span of ancient Egyptian civilization. Although we do not have a full listing in Egyptian of the long tradition of royal dynasties, we do have one based on Egyptian traditions that was compiled in Greek by an Egyptian priest of the 3rd century BC named Manetho. There are 31 dynasties of Egyptian kings, including foreign rulers, after which Egypt was ruled by the Ptolemies, kings and queens of Macedonian descent who controlled Egypt after Alexander the Great’s conquest (see 10.1). With the defeat of the last Ptolemaic queen, Cleopatra VII, and her lover, the Roman general Marc Antony, Egypt became a province of the Roman Empire.

1.2 Egyptian Archaeology

Archaeology is the study of the material remains of past cultures, from stone tools to stone pyramids, within their excavated contexts. Unlike the hard sciences, such as physics or chemistry, there are no laws in archaeology. Whereas science is concerned with studying regularities that can be observed and tested through experiment, and then verified by repeating the experiment, archaeology has no such system of proof. An archaeological site (or part of it) can only be excavated once, so it is important to do this as carefully as possible, and then record, analyze, and publish all the excavated data, as well as observations made about the excavations. Archaeological evidence is always fragmentary, and archaeologists must analyze and interpret this fragmentary evidence in order to model or reconstruct the past, offering the most probable explanation of ancient cultures, their forms and behavior.

Archaeology studies the long prehistoric periods and cultures in Egypt and elsewhere. The prehistory of Egypt spans perhaps as many as one million years. Most of the material remains that prehistoric archaeologists study are stone tools and the waste from producing stone tools (see Chapter 4).

About the time from when there is evidence of early agriculture in Egypt, there is also evidence of pottery, and increasing numbers of potsherds are found at archaeological sites. Potsherds (broken pieces of pots) are important sources of information because pottery styles tend to change rapidly through time and are generally culture specific. Potsherds are useful for classifying late prehistoric as well as Dynastic sites by period and/or culture; sometimes imported, foreign pots are also identified at Egyptian sites.

With the emergence of pharaonic civilization came the invention of hieroglyphic writing (see 2.2), which becomes an increasingly important source of information for all scholars of ancient Egypt. Archaeologists excavating pharaonic sites not only have the evidence of potsherds and many different types of artifacts (including stone tools, which continued to be produced in pharaonic times), but also hieroglyphic inscriptions and graphic art integrated with well-preserved structures, especially tombs and associated mortuary monuments. Because archaeological evidence is fragmentary, archaeologists must rely on all forms of information, including texts and pictorial representations, and this is especially true for the study of pharaonic Egypt.

Egyptian archaeology is the study of both prehistoric cultures and pharaonic civilization in the Egyptian Nile Valley and Delta, as well as the surrounding deserts. To the south of the First Cataract (a natural barrier to transportation along the Nile) at modern-day Aswan, was the land of Nubia, which was periodically controlled by the Egyptians. Archaeological evidence of Egyptian activities is abundant there. The ancient Egyptians also left extensive archaeological and textual evidence in the Sinai Peninsula. Although this region was not a part of ancient Egypt, archaeological sites in the Sinai are also relevant to Egyptian archaeology. There is also important archaeological evidence in the oases of the Egyptian Western Desert, the mines and quarries of the Eastern Desert, and desert routes to these locations, as well as harbors along the Red Sea coast.

Given the extensive body of texts, the archaeology of ancient Egypt is an example of historical archaeology, with the written evidence providing the historical context of excavated finds. Textual evidence greatly expands a more specific meaning of ancient Egyptian finds, its history, forms of government, social organization, and the economy – as well as more elusive beliefs and ideas. In turn, interpretation of the archaeological evidence within its excavated context can reinforce the historical evidence from texts. Occasionally, archaeological evidence contradicts the validity of information conveyed in writing – illustrating the complexity of historical interpretations based on texts.

Archaeological fieldwork in Egypt has been conducted according to the research problems and priorities of particular expeditions. Present-day scholars of ancient Egypt come from a variety of disciplines, which frequently overlap in practice. These include philologists and Egyptologists, historians (of ancient Egypt, the ancient Near East, the Bible, and the classical world), art historians, as well as archaeologists. Historians are usually interested in reconstructing the history of use of the specific site(s) they are excavating, while art historians focus on recording architectural plans and decoration, works of art, and changes in style and design through time. For Egyptologists, an important focus of fieldwork is often epigraphic studies, and philologists study ancient texts. Archaeologists can be trained in one or more of these fields, or specifically trained in archaeology, including Near Eastern archaeology, classical archaeology (the archaeology of ancient Greece and Rome), anthropological archaeology, and archaeology as taught in departments of archaeology, which are mainly found in European universities. Archaeologists' training and background strongly influence their focus and methods of investigation.

1.3 Egyptology

Whereas the methods of archaeology, both prehistoric and pharaonic, developed in the later 19th and 20th centuries – and continue to develop – Egyptology, the study of ancient Egypt, is an even older discipline. The systematic study of ancient Egypt is generally seen as beginning with the Napoleonic expedition to Egypt in 1798 (see Box 1-A). The great military tactician who crowned himself emperor of France (before he met his Waterloo), Napoleon Bonaparte was also a man of the Age of Enlightenment. In Cairo Napoleon founded the French Institute of Egypt, whose successor was re-established in the later 19th century as the Institut français, which continues to be an important center of archaeological and Egyptological studies in Egypt today. Soldiers of Napoleon uncovered the Rosetta Stone while building fortifications in the Delta, and, recognizing its significance as a possible aid to the decipherment of hieroglyphs, Napoleon had Parisian lithographers brought to Egypt to make copies of it. The Rosetta Stone was subsequently handed over to the British, who defeated Napoleon's fleet in Egypt, and it now resides in the British Museum in London, but Jean-François Champollion, a French scholar who studied copies of the Rosetta Stone, made the decipherment of ancient Egyptian (see Box 2-B and Figure 1.1).

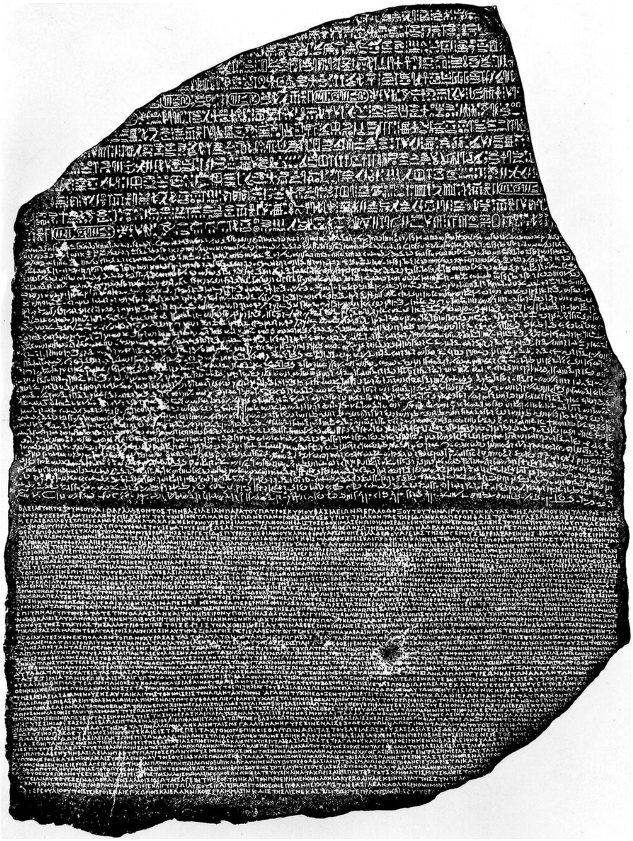


Figure 1.1 The Rosetta Stone, 196 BC, in hieroglyphic and demotic scripts with a Greek translation at the bottom. Granodiorite, 118 × 77 × 30 cm. EA 24 London, British Museum.

Source: akg-images.

Box 1-A The Napoleonic expedition to Egypt

After major victories in northern Italy in 1796, Napoleon Bonaparte had more grandiose plans. His army of 25,000 invaded Egypt in 1798, ostensibly to overthrow the oppressive provincial rule of the Ottomans, but his longer-range plans were to disrupt British control of the sea route to India and farther east, and build a canal through Suez (which was only accomplished seven decades later).

With Napoleon's army in Egypt was a group of 165 *savants* (scholars and scientists), as well as engineers, cartographers, and artists, who were to study, record, and publish as much as possible about Egypt's natural, ancient, and modern history and culture. They came well equipped, with boxes of scientific instruments and a library of books about Egypt. While some of the scholars stayed in Cairo at the newly founded Institute of Egypt, others accompanied the army up the Nile. Reaching Aswan a year after landing at Alexandria, they had by then recorded most of the major monuments they excavated along the way.

Although Napoleon managed to escape from the British naval blockade of Egypt, which began not long after the invasion, and returned to France, his Commission of Arts and Sciences remained in Egypt with the army. Eventually the British allowed the French scholars to leave Egypt with an enormous quantity of records and specimens. But the Rosetta Stone, found in the Delta early in the Egyptian campaign, was surrendered to the British.

The result of Napoleon's scientific expedition in Egypt was much more successful than his military one. Twenty-four volumes of the *Description de l'Égypte* were later published. Ten of these volumes consisted of plates with over 3,000 illustrations. These investigations and their publication provided a major impetus to the incipient field of Egyptology, the systematic and scholarly study of ancient Egypt.

1.4 History of Egyptology and Egyptian Archaeology

The ancient Greeks and Romans were interested in the history of pharaonic Egypt. In the 5th century BC Herodotus, a Greek historian who wrote a nine-volume *History*, visited Egypt and narrated its history, including its natural history, in his Book II and part of Book III. The accuracy of some of Herodotus's account has been questioned by historians because some fairly fanciful explanations were included in his books. But when writing about the period in which he lived and the Persian conquest of Egypt Herodotus provides a vital source of information. In late Ptolemaic times Egypt was the subject of historian/geographer Diodorus Siculus's Book I, and Strabo, who visited Egypt shortly after the Roman conquest, provides detailed information about Alexandria, as well as other sites in the country.

After about AD 400 the ancient Egyptian hieroglyphic and demotic scripts ceased to be used and were gradually forgotten, although the ancient language continued to be spoken as Coptic, written in the Coptic alphabet (an extension of the Greek alphabet). In late antiquity, when Christianity spread throughout Egypt, ancient Egyptian culture, with its pagan temples, became increasingly discredited. Christian hermits occupied isolated Dynastic tombs and temples fell into disrepair as their sites were taken over for churches. Christian communities and monasteries continued to exist and use Coptic after the Muslim conquest of Egypt in the 7th century AD, but pharaonic Egypt receded into the legendary past – with its language gradually replaced by Arabic.

It was not until the late 16th and 17th centuries that scholarly travelers from Europe began to take an interest in ancient Egypt. Among them, John Greaves (1602–1652), an astronomer at Oxford University, made measurements of the Giza pyramids and cited Arab sources in his 1646 publication *Pyramidographia*. Although most of his papers did not survive, Claude Sicard (1677–1726), a Jesuit priest and missionary in Egypt (1707–1726), was the first European traveler to describe the monuments at Philae, Elephantine, and Kom Ombo in southern Egypt. The Reverend Richard Pococke (1704–1765), who also reached Philae, published two volumes about his travels in lands of the eastern Mediterranean (1743–1745), with detailed descriptions of a number of Egyptian sites and monuments. The well-illustrated travel volume of Frederick Ludwig Norden (1708–1742), a Danish naval officer, was published posthumously and was reprinted throughout the later 18th century. The Scot James Bruce (1730–1794), who traveled through Egypt, northern Sudan, and northern Ethiopia (published in his *Travels* in 1790), excavated the tomb of Rameses III in the Valley of the Kings – which is still sometimes called “Bruce’s Tomb.” Although he did not travel to Egypt, the Danish scholar Georg Zoëga (1755–1809), who worked on Egyptian material in Rome, published his great work on obelisks in 1797. Zoëga compiled a corpus of hieroglyphic signs, and his catalog of Coptic manuscripts was published posthumously.

Napoleon’s invasion of Egypt was mainly for military purposes, especially to gain control of the route through the Red Sea to the Middle and Far East, but he took with him a mission with much broader goals. Along with his army, which invaded Egypt in 1798, Napoleon brought French *savants*, scholars and scientists from different disciplines, as well as artists, cartographers, and engineers, to study and record the evidence of ancient and Islamic Egypt, and the country’s natural history. Dominique Vivant, Baron de Denon (1747–1825), a diplomat under the last two French kings, survived the French Revolution and later introduced Napoleon to Josephine, who became his mistress and then wife. In Egypt, Denon recorded ancient monuments, sometimes under fire from the retreating Ottoman provincial army, which Napoleon’s army was pursuing up the Nile. In 1802 he published *A Journey to Lower and Upper Egypt*, while the *Description de l’Égypte* (*Description of Egypt*), the multi-volume study of the Napoleonic expedition, which was edited by Jomard, appeared later with drawings by Denon and many others.

Publications which resulted from the expedition created great public interest in ancient Egypt, in Europe and North America. After the hieroglyphic script had been deciphered, and texts were translated and the structure of the language became better known from around 1850 onward, much more information about the civilization also became available. Inspiration from ancient Egypt appeared in many forms, for example, in the 1816 sets designed by Karl Friedrich Schinkel for Mozart’s opera *The Magic Flute* (Figure 1.2).

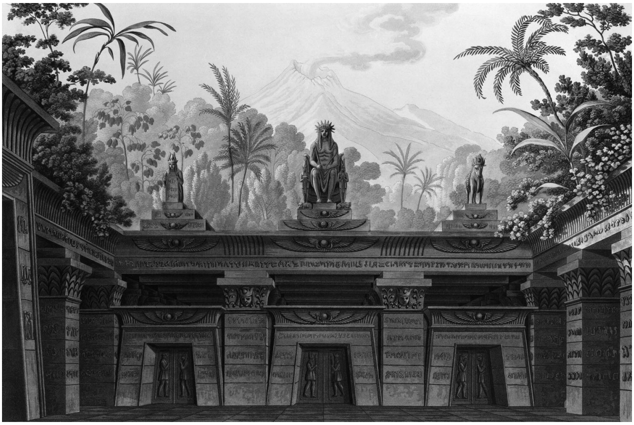


Figure 1.2 Set for the opera, *The Magic Flute*, Act I, scene 15, by Wolfgang Amadeus Mozart. Stage design by Karl Friedrich Schinkel for the 1816 production at the Berlin Opera. Aquatint by C. F. Thiele after K. F. Schinkel.

Source: akg-images.

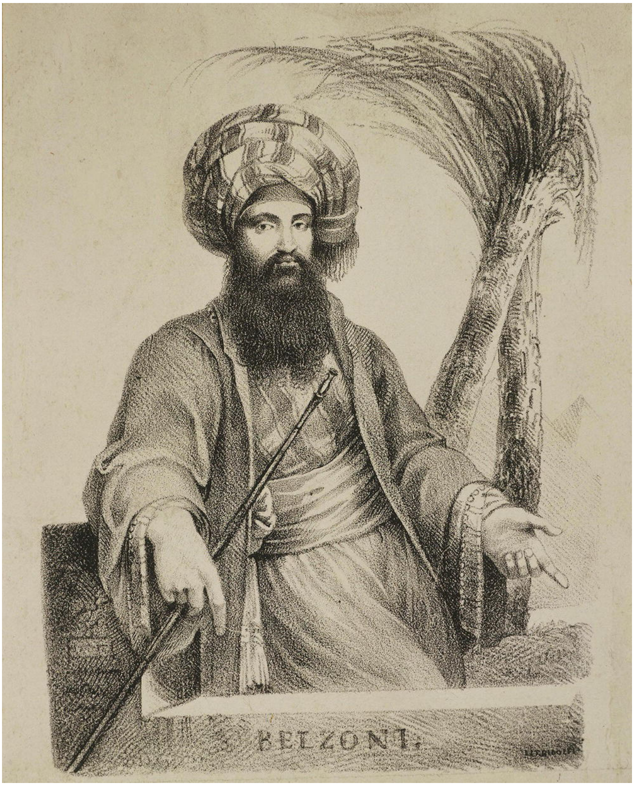


Figure 1.3 Giovanni Battista Belzoni (1778–1823). Engraving.

Source: The Art Archive/Bibliothèque des Arts Décoratifs Paris/ Gianni Dagli Orti.

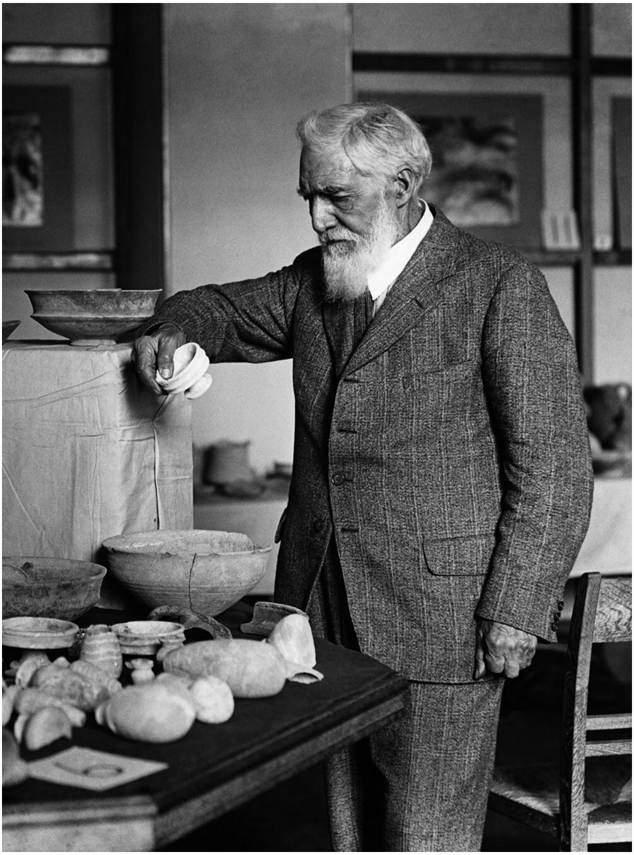


Figure 1.4 British archaeologist Sir William Matthew Flinders Petrie (1853–1942) with pottery he excavated in southern Palestine, exhibited at University College London ca. 1930.

Source: © Hulton-Deutsch Collection/CORBIS.

Decorative arts, including furniture and porcelain (especially from the Sèvres and Wedgwood factories), were embellished with Egyptian motifs, and architecture was designed with Egyptian elements. Temple gateways called pylons, seen in Egypt in the New Kingdom and later, were built at the Highgate Cemetery in London, as well as at the Grove Street Cemetery in New Haven, Connecticut, and the Mount Auburn Cemetery in Cambridge, Massachusetts. While gravestones in the shape of small Egyptian-style obelisks had already become common, real Egyptian ones were brought from Egypt to cities in northern Europe and

America, including Paris, London, and New York.

At the same time, the great Egyptian collections in the Louvre, the British Museum, the Rijksmuseum van Oudheden in Leiden in the Netherlands, and the Egyptian Museum in Turin, Italy, were being amassed by Europeans acting in Egypt as consuls and agents – as well as by various adventurers and explorers. One of the most colorful of these Europeans was the Italian Giovanni Battista Belzoni (1778–1823), who began his foreign career as a strongman in a London theater. In 1815 he traveled to Egypt where the British consul, Henry Salt (1780–1827), appreciated his prodigious physique (Belzoni was 200 centimeters – 6′7″ – tall) and hired him to collect Egyptian monuments, including a 7.5-ton statue of Rameses II now in the British Museum. But Belzoni was not a tomb robber. Exploring the Valley of the Kings, where he found four royal tombs (in 12 days), Belzoni recorded the very impressive tomb of Sety I, with its well-preserved paintings, in watercolors. At Rameses II's rock-cut temple of Abu Simbel in Nubia he copied inscriptions and made a to-scale plan.

Scholarly expeditions to Egypt were also conducted in the earlier 19th century. Jean-François Champollion (1790–1832), and Ipollito Rosellini (1800–1843) from Pisa, recorded Egyptian monuments in the 1820s. A Prussian named Carl Richard Lepsius (1810–1884) traveled up the Nile as far as the site of Meroe, in northern Sudan, and published his 12-volume *Denkmaeler aus Aegypten und Aethiopien* (*Monuments of Egypt and Ethiopia*) from 1849 to 1859. This great work is still the most important 19th-century record of Egyptian monuments. John Gardner Wilkinson (1797–1875) spent the years 1821 to 1833 in Egypt, as well as making later visits, and recorded many tomb and temple scenes and inscriptions in great detail. He not only traveled to the major ancient sites in the Nile Valley, but was also the first to record some remote sites in the desert.

While the results of these expeditions were experienced mainly in Europe, the situation in Egypt began to be reversed when François Auguste Ferdinand Mariette (1821–1881) first went there in 1850 to acquire Coptic and Ethiopic manuscripts for the Louvre. Excavating at Saqqara, he found the important tomb of the 5th-Dynasty official Ti (Figure 6.16) and the huge underground gallery called the Serapeum, where the sacred Apis bulls of Memphis were buried (Figure 9.8). Mariette believed that Egypt's ancient monuments should not be removed wholesale from the country, and in 1858 he entered the service of the Khedive (ruler) of Egypt. Seeking to protect Egypt's monuments, Mariette founded the Egyptian Museum in Cairo and the Antiquities Service. His works include extensive publication of his excavations, as well as supplying an initial scenario for Verdi's Egyptian opera *Aïda* (first performed in Cairo in 1871).

Mariette's successor as Director of the Egyptian Museum and Antiquities Service was Gaston Camille Charles Maspero (1846–1916), who received the first doctorate in Egyptology in France in 1874. Maspero did restoration work in the temples of Luxor and Karnak, and copied the earliest known royal mortuary texts, called the Pyramid Texts (Plate 6.7), found in late Old Kingdom pyramids. His truly monumental accomplishment, however, was to organize and catalog the artifacts in the Cairo Museum. He published over 1,200 works!

Early methods of excavating were developed at Thebes by Alexander Rhind (1833–1863), a Scottish lawyer who visited Egypt in the 1850s. Most of the antiquities that he acquired in Egypt are now in the Royal Scottish Museum, Edinburgh. While many of the excavators in Egypt in the later 19th century were interested in clearing ancient monuments and tombs, and finding art and hieroglyphic inscriptions, archaeological methods were still rudimentary. Sir William Matthew Flinders Petrie (1853–1942) greatly advanced the methods of archaeology in Egypt and made important and original contributions to it.

Petrie first went to Egypt in 1881 to do a detailed survey of the Giza pyramids, and he continued to work there and in Palestine for almost 60 years, excavating more sites in Egypt than any other archaeologist. He soon began to excavate for the newly founded Egypt Exploration Fund (later the Egypt Exploration Society), based in London. Petrie trained and carefully supervised his Egyptian workers. He recorded a broad range of the excavated finds, not only impressive works of art, but also pottery of all types, and his field notes contain information about the contexts of excavated finds.

Some of the important sites where Petrie excavated in Egypt include Abydos, Tell el-Amarna, Coptos/Quft, Kahun, Memphis, and Naqada. Every year he published detailed accounts of his excavations for the Egypt Exploration Society and later the Egyptian Research Account. In the field Petrie had a reputation for keeping a very spartan camp, and later excavators have sometimes claimed that they found unused cans of food which Petrie had buried for the next field season. A chair of Egyptology was created for Petrie at University College London by the novelist Amelia Edwards, who was also a founder of the Egypt Exploration Fund. The Petrie Museum of Egyptian Archaeology is now located at University College London.

Another important archaeologist who advanced new field methods in Egypt was George Andrew Reisner (1867–1942), Professor of Egyptology at Harvard University and Curator of the Egyptian Department of the Museum of Fine Arts, Boston. Reisner realized the importance of field photography, as well as keeping detailed records, maps, and drawing books of everything he excavated. In his early years in Egypt he excavated the large cemeteries at Naga el-Deir, and also at the sites of Coptos/Quft and Deir el-Ballas.

Then from 1907 to 1909 Reisner was director of the Egyptian government's Archaeological Survey of Nubia, to record sites when the first Aswan High Dam was heightened. Reisner later excavated at the impressive Nubian sites of Kerma (see 7.12 and Box 7-D), Gebel Barkal, el-Kurru, Nuri, and Meroe (see 9.5 and 10.9). After Egypt, the early Nubian civilizations are the oldest ones in Africa; hence Reisner was a pioneer in developing an entirely new field of studies, of ancient Nubia. After World War I Reisner continued excavating in Nubia, at Egyptian forts built during the Middle Kingdom (see 7.10), and a second archaeological survey of Nubia was conducted under the direction of British archaeologist Walter Emery. In 1930 Emery and Lawrence Kirwan discovered the important cemeteries at Ballana and Qustul, where Nubian kings of a culture called the X-Group or Ballana culture were buried in the 4th–6th centuries AD.

In Egypt Reisner is best known for his excavations at Giza (see 6.6 and 6.8). Finds from his work at Giza and in Nubia are in the Cairo and Khartoum museums, as well as in the Museum of Fine Arts, Boston, which has one of the most impressive collections of ancient art in North America. His excavations at the third Giza pyramid complex of Menkaura, especially in the mortuary and valley temples, unearthed a great wealth of royal sculpture (Plate 6.5). At Giza Reisner also discovered a rock-cut chamber at the bottom of a ca. 33-meter shaft with gold-covered furnishings, jewelry, and other artifacts belonging to Queen Hetepheres (Figure 6.13), Khufu's mother and wife of Sneferu (who built not one but three royal pyramids), as well as the tomb chapel of another 4th-Dynasty queen, Meresankh III.

Another important Egyptologist and contemporary of George Reisner was James Henry Breasted (1865–1935), who was the first American to earn a PhD in Egyptology (at the University of Berlin in 1894). Breasted was also the first to teach Egyptology at an American university. As Director of the Haskell Oriental Museum (now the Oriental Institute Museum) at the University of Chicago, Breasted established Chicago House, the university's research center in Luxor, Egypt, with funding from John D. Rockefeller. Recording ancient inscriptions and reliefs, especially endangered ones, the Oriental Institute's expedition at Luxor has produced impressive publications, including the entire temple of Medinet Habu, built in the 20th Dynasty by Rameses III. Using his work in Berlin on an immense dictionary of ancient Egyptian (the *Wörterbuch der ägyptischen Sprache*), Breasted published his *Ancient Records of Egypt*, a compilation of translations of texts spanning about 2,500 years, along with his commentary. His popular book, *A History of Egypt from the Earliest Times down to the Persian Conquest*, was based on these studies.

German scholars were also making significant contributions to Egyptian archaeology at this time. In 1907 Egyptologist Ludwig Borchardt (1863–1938) founded the German Archaeological Institute in Cairo and was its first director, a position he held for 21 years. Borchardt excavated Old Kingdom pyramids at Abusir as well as the best preserved example of a 5th-Dynasty sun temple at Abu Ghurob (Figure 6.14). His excavations of houses at Tell el-Amarna included that of the sculptor Thutmose, where the famous head of Queen Nefertiti (Plate 8.4) was found. Trained first as an architect, Borchardt made important contributions to the study of ancient Egyptian architecture, both monumental and domestic.

Undoubtedly the most famous archaeological discovery in Egypt in the 20th century is the tomb of Tutankhamen (see Box 8-B), uncovered by the British archaeologist Howard Carter (1874–1939). Carter was a skillful artist and first went to Egypt to copy Middle Kingdom tomb scenes at Beni Hasan. Appointed Inspector General for Upper Egypt by Maspero in 1899, he made important discoveries, including the tomb of Mentuhotep II, who unified Egypt through conquest and became the founding king of the Middle Kingdom (Plate 7.3). First hired in 1908 by Lord Carnarvon (1866–1923), it was not until 1917 that Carter began systematic investigations at Thebes in the Valley of the Kings. After five frustrating field seasons looking for Tutankhamen's tomb, Carter's discovery in 1922 created a sensation in the world press. A careful investigator, Carter then spent ten years recording and clearing the tomb, and conserving its artifacts. Although it has popularly been reported that the tomb contained a curse, this is not true. Carter died in England in 1939, 17 years after the tomb was opened.

Major European countries also founded research institutes or sponsored expeditions in Egypt, many of which continue to the present. In the 20th century ancient settlements also became the foci of archaeological investigations, though compared to tombs and temples many such sites have been poorly preserved. Long-term excavations at Tell el-Amarna (by the Germans, 1911–1914; by British archaeologists for the Egypt Exploration Society, 1921–1936 and 1977 to the present, under the direction of Barry Kemp) have provided information about a unique royal city of the 18th-Dynasty king Akhenaten (see 8.4). Excavations at the workmen's village of Deir el-Medina by the French Archaeological Institute, Cairo, from 1917 to 1951, under the direction of Bernard Bruyère, have provided much information about daily life as well as death in Egypt during the New Kingdom (see Figure 8.21 and Box 8-E). At Tell el-Dab'a in the Nile Delta, excavations by Manfred Bietak and now Irene Forstner-Müller of the Austrian Institute, Cairo (1966–1969 and 1975 to the present) have yielded much new information about the rulers of foreign origin who controlled northern Egypt between the Middle and New Kingdoms (see 7.11). In southern Egypt, on Elephantine Island, Werner Kaiser of the German Archaeological Institute, Cairo has directed excavations at a border town that was occupied for ca. 4,000 years, including the remains of one of the oldest temple shrines in Egypt, originating ca. 3200 BC.

With so much archaeological and textual evidence being unearthed in Egypt, Egyptologist Adolf Erman (1854–1937) of the University of Berlin first conceived of a work to reference these data. The project was later taken up by Oxford professor F. Llewellyn Griffith (1862–1934), who engaged Bertha Porter (1852–1941), a bibliographer who had studied with Erman and Griffith, and her assistant and successor Rosalind Moss (1890–1990). Beginning around 1900, Porter worked on the bibliography in England (and never traveled to Egypt), while Moss later verified the information in Egypt. Their *Topographical Bibliography*, which continues as a project, also includes evidence from Nubia and the Egyptian oases, as well as inscribed Egyptian artifacts from outside Egypt and in foreign museums.

Gertrude Caton Thompson (1888–1985) played a fundamental role in archaeological investigations in Egypt. Using stratigraphic controls, she excavated a Predynastic village at Hammamiya in Middle Egypt in 1924 (see 4.9). Working with geologist Elinor Gardner several years later, Caton Thompson identified the earliest known Neolithic culture, which she called the Faiyum A, in the Faiyum region of northern Egypt (see 4.8). Caton Thompson later investigated the prehistory of Kharga Oasis, in the Western Desert, recording sites from the Lower Paleolithic to the Neolithic.

Many more prehistorians came to work in Egypt and northern Sudan in the 1960s in connection with the construction of the second High Dam at Aswan. Lower (northern) Nubia was eventually flooded by the waters of Lake Nasser, but before this occurred thousands of archaeological sites, from prehistory to the Ottoman period, were recorded and selectively excavated. Archaeologists and scholars from all over the world participated in this monumental undertaking, including prehistorians who had never worked before in Africa. Especially significant has been the work of Fred Wendorf, of Southern Methodist University, on Paleolithic cultures in the Nile Valley. Wendorf’s investigations in the Western Desert, sometimes in remote places where archaeologists had never ventured before, have revealed unique evidence of prehistoric habitation during periods when this desert was less arid than it is today (see 4.7).

The archaeological campaign in Nubia in the 1960s also investigated pharaonic sites, as well as sites of the various Nubian cultures contemporary with pharaonic Egypt and later periods. Hundreds of rock drawings and inscriptions were recorded as well. But the campaign is perhaps best known for its spectacular efforts organized by UNESCO, working with the Egyptian Antiquities Organization, to save Egyptian temples in Nubia, especially the removal of Rameses II's two rock-cut temples of Abu Simbel to a higher location (Plate 8.13). At Aswan to the north of the new dam, the threatened Temple of Isis and associated monuments on Philae Island were later dismantled and reassembled on higher ground on a nearby island in the 1970s (see 10.5).

Fortunately to the south of Lake Nasser archaeological sites in Upper Nubia were not threatened. From 1977 to the present excavations have been conducted at the ancient city of Kerma and in its huge cemetery by Swiss archaeologist Charles Bonnet and now Matthieu Honegger (Swiss Archaeological Mission to the Sudan). Although Kerma peoples were contemporaries of the Egyptians in the Old and Middle Kingdoms, the evidence at Kerma is of a very different culture from that of ancient Egypt (see 7.12 and Box 7-D).

Significant developments of Egyptian-directed archaeology also occurred in the 20th century. Increasingly the Egyptian Antiquities Service/Organization (later the Supreme Council for Antiquities, and now the Ministry of Antiquities and Heritage) was run by Egyptians and Egyptian-trained Egyptologists. Egyptian officials have conducted excavations at many sites in Egypt and filled the Cairo Museum, as well as museums throughout Egypt, with artifacts from their excavations of prehistoric, pharaonic, Greco-Roman, and Coptic sites. Egyptology is taught at a number of universities in Egypt, and Egyptian Egyptologists and officials work together with foreign expeditions. The Ministry of Antiquities and Heritage is the organization which regulates all excavations and issues permits to do archaeological investigations in Egypt, as well as ensuring the protection and preservation of ancient sites and monuments.

Although robbing and destruction of archaeological sites in Egypt has taken place since antiquity, the establishment of the Antiquities Service in the later 19th century helped to protect sites for controlled excavations by archaeologists and other scholars. Since the 2011 revolution that overthrew the government of Hosni Mubarak, however, many archaeological sites in Egypt have been damaged by pillaging for antiquities to sell on the black market, or by the expansion of modern villages and cemeteries into areas of the ancient sites. With the socio-political unrest that followed this revolution many ancient sites were no longer well protected, which has resulted in looting and/or destruction of ancient remains.

Investigations have been conducted at thousands of sites in Egypt and Nubia for more than 150 years, but it is only possible to discuss some of the more prominent ones in this book.

1.5 Archaeological Methods

Flinders Petrie was the first archaeologist working in Egypt to exploit the importance of stratigraphy, the principle that through time archaeological remains are deposited in layers or strata of soil. Many factors can complicate the stratigraphy of archaeological sites, from animal burrowing to earthquakes, but in general the latest artifacts and other remains are in layers closest to the present surface, while the earliest ones are lower in the ground, just above bedrock or sterile soil. Petrie applied the principle of stratigraphy in archaeology in 1890 at his excavation of Tell el-Hesy in Palestine, when he dated the different layers of the settlement by the associated pottery, which he knew from Egypt. Petrie recorded these strata in his drawings of sections, the vertical record of excavated cross-sections through different strata of the mound.

Before Petrie, excavators in Egypt generally discarded pottery. Recognizing the significance of changing pottery styles as a chronological marker, Petrie sampled and classified the pottery from his excavations. One result of his investigations of Predynastic cemeteries was the first seriation of graves, using pottery types and other artifacts. In his seriation scheme Petrie ordered the graves in a relative sequence (which he called Sequence Dating; see Box 5-A), from early to late, which we now know roughly spanned the fourth millennium BC (based on radiocarbon dating, which was not invented until the mid-20th century). Seriation is a technique which archaeologists routinely use today to order finds into relative periods of time, from early to late.

Another important early development in archaeological methods was George Reisner's survey strategy to find and record threatened sites when the first High Dam at Aswan was heightened in 1907. Traverses were done along both banks of the Nile in the northern half of Egyptian Nubia up to the height that would be flooded. This was the first large-scale, systematic salvage or rescue archaeology done anywhere in the world; such archaeology would be conducted increasingly in the later 20th century, as archaeological sites in most countries became endangered by expanding towns and cities, and by economic and agricultural development.

With the construction of the second High Dam at Aswan in the 1960s, a number of prehistorians did fieldwork in southern Egypt and northern Sudan for the first time. They employed rigorous methods for the survey and excavation of prehistoric sites, and the classification and analysis of artifacts, especially stone tools and pottery.

As anthropologically trained archaeologists, many prehistorians working in Egypt and Sudan were influenced by new developments in archaeological method and theory in North America and Europe in the 1960s and 1970s. Processual archaeology proposed that archaeology should be done using scientific methods and theory. Although some scientific methods from the "hard sciences" are not applicable for archaeology, hypothesis testing, where a model of some aspect of socio-cultural development is formulated and then tested by archaeological fieldwork, was deemed important for research design. Field investigations include both excavations and archaeological survey, not only to locate sites, but also to obtain data about settlement patterns (although this has often been very difficult to do in Egypt because of the poor preservation of ancient settlements; see 3.3). Bruce Trigger's pioneering study of settlement patterns in Nubia since the beginnings of agriculture was the first of its kind. An important project which has studied late prehistoric settlement patterns in an area in Upper Egypt (and changes in settlement location through time) has been that of Michael Hoffman and his successors at Hierakonpolis (see 5.3).

How sites in Egypt are surveyed and/or excavated very much depends on the period of the site and the goals of the archaeologists – as well as the amount of funding they have for research and the terms of their permits. Increasingly, satellite image analysis is used to locate archaeological evidence before any fieldwork is ever conducted and the work of Sarah Parcak is especially pioneering in the methodology used. Through satellite image analysis Parcak has possibly located a major site, the Middle Kingdom capital of Itj-tawy-Amenemhat (see 7.1), as well as entire streets of houses in the Third Intermediate Period capital of Tanis (Figure 1.5; see 9.3). Her analyses suggest that a number of ancient settlements in Egypt may still be preserved – and therefore are excavatable.

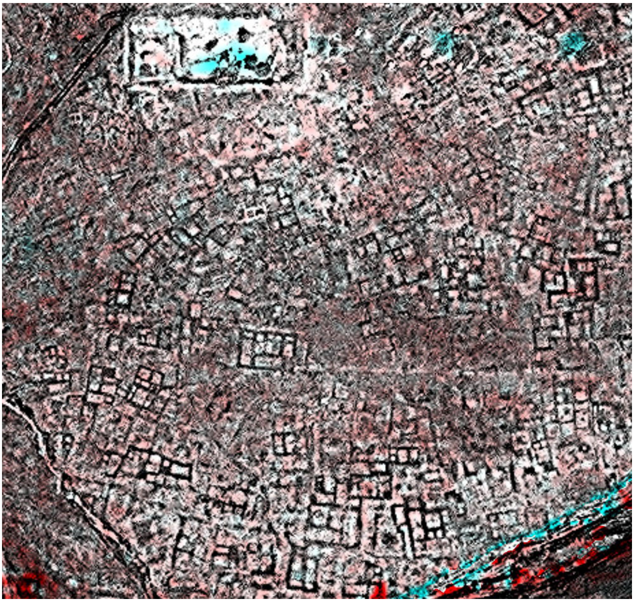


Figure 1.5 Quickbird and WorldView-1 satellite image of Tanis, Egypt, processed using band combinations, high pass filtering and additional techniques.

Source: used by permission of Sarah Parcak, University of Alabama at Birmingham.

With data from satellite image analysis, archaeologists can then locate and record the ancient evidence still on the surface in the field, such as concentrations of potsherds or remains of architecture, and conduct small-scale test excavations to verify the buried evidence. With such information, archaeologists can then establish priorities for excavation and/or conservation of specific sites or evidence within a site.

For excavations, all archaeological data must be recorded within their context, within the strata in which they were deposited, otherwise their chronological and cultural significance is lost. The excavation of many prehistoric sites, often containing no other artifacts than stone tools, requires the painstaking recording of microstratigraphic sequences within small excavation units (such as 1 × 1 meter in area). For the excavation of pharaonic period sites with large-scale architecture, archaeologists work in units of up to 10 × 10 meters in area and record the stratigraphy of finds within the architectural units. Stratigraphy can be excavated and recorded using the older method of square excavation units separated by vertical walls of soil called baulks, where the stratigraphy is evident in profile ("Wheeler squares," named after the early 20th-century British archaeologist Sir Mortimer Wheeler, who pioneered the technique; Figure 1.6), or the more recent method of excavating in Harris "stratigraphic units," where each stratum, feature (such as a hearth), or architectural component is given a separate number in order to establish a graphic "matrix" to identify the sequence of these units. The Harris methodology is useful for recording strata of many different types of sites – from strata of a few centimeters often encountered at prehistoric sites to tomb structures and their interior deposits to large, open area excavations of features and architecture.

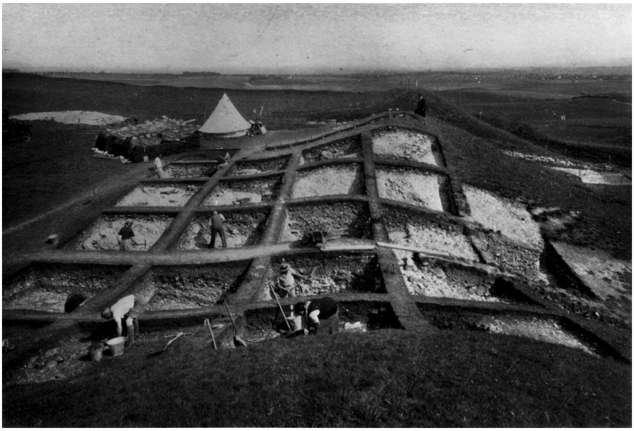


Figure 1.6 Wheeler excavation squares at a site.

Source: used by permission of the Society of Antiquaries of London.

Although Akhenaten's city at Tell el-Amarna was only briefly occupied in the 18th Dynasty, and thus most of its architecture dates to only one phase of construction, excavating ancient architecture can often be complicated by multi-phased constructions – additions or remodeling from later periods, which also need to be carefully recorded. Such recording is made even more complex when these structures were built and rebuilt in tells, mounds of ancient settlements which have been built up through time by many layers of human habitation (see 3.3). The problems of excavating within ancient architecture, such as stone temples or rock-cut tombs, sometimes require the work of architects or engineers to stabilize the structure so that it is safe enough for human excavators. It can also be challenging to record stratigraphic sequences within deposits of sand, which is soft and shifting, such as is often encountered at sites in Upper Egypt, whereas in the Delta the stratigraphy of cultural material in deposits of silts and sand is more distinct. Another problem archaeologists often face when working in the Nile floodplain or the Delta is the increasingly high water table: pumping out ground water in archaeological trenches is a continuous process – and very costly.

Archaeology in Egypt now includes statistical analyses of archaeological data, as well as various types of scientific analyses. Material scientists and other specialists analyze the materials used in every aspect of past cultures, from the minute remains of paint in rock drawings to the metallurgy of metal tools. Form, artifact function and use, as well as the technology involved in their production are studied. To better understand ancient technology, artifacts (and even a small Egyptian pyramid!) have been reproduced in what is called experimental archaeology.

Ancient botanical evidence is obtained through a technique called flotation: small plant remains (especially carbonized seeds) float to the surface when soil samples from sites are processed in water. Paleo-ethnobotanists, who do such analyses, study the origins of agriculture and Neolithic cultures in Egypt, and also provide important economic information about agriculture and plant exploitation in pharaonic Egypt. Ethno-archaeologists study traditional crafts, housing and settlements, farming and food preparation, and other practices in rural Egypt, to help explain archaeological evidence through ethnographic analogy. There are scientists who study ancient deposits of pollen (palynology), which may yield environmental information. Phytoliths, microscopic casts of plant cells, may also be present at sites for study.

Human bones (and teeth) are analyzed by physical anthropologists to determine age, sex, and stature, as well as evidence for diet, nutrition/nutritional deficiencies, and overall health; diseases and pathologies; long-term (occupational) stress; and accidents and physical trauma.

Analysis of ancient DNA derived from the cell nuclei of human remains (from bones, for example) may yield information about an individual's sex and genealogy. But the ancient DNA may have been badly degraded through time, requiring special laboratory techniques to process. Contamination of samples with modern DNA is also a potential problem.

Animal bones are studied by zooarchaeologists not only for age and sex, but also to determine many other factors about both wild and domesticated species – in order to better understand animal husbandry practices. Identification of the dung of domesticated animals, which is sometimes well preserved in Egyptian settlements, may also yield information about animal behavior – and human intervention in this.

Increasingly geologists, geomorphologists, and specially trained geoarchaeologists work with archaeologists, helping to differentiate natural geological processes at archaeological sites from the results of human activities, as well as the processes that transformed a site after it was no longer used (see 3.3). On-ground remote sensing (geophysical prospecting) is used to locate buried remains, and includes the use of equipment such as magnetometers and ground-penetrating radar (Figure 1.7). Geological boring is also used to gain a better understanding of (buried) sites as well as how such sites relate to changing landscapes and water courses. Topographic mapping of excavated remains is done by professional surveyors.

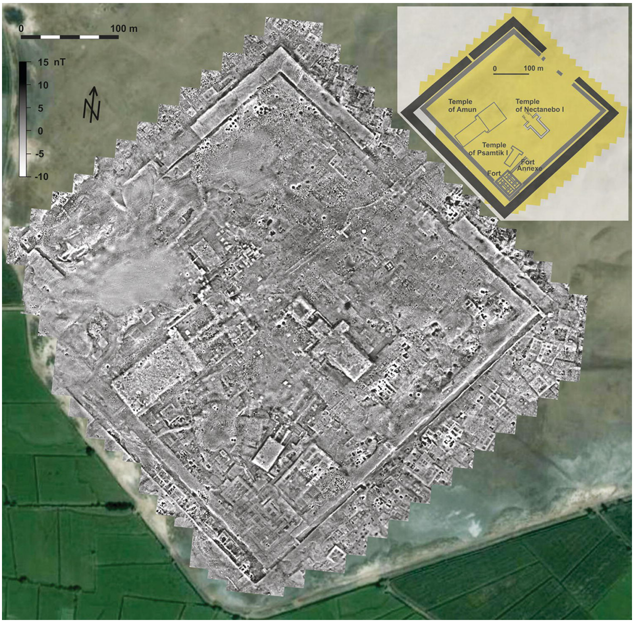


Figure 1.7 Tell el-Balamun, magnetic map of the temple enclosure.

Source: Reproduced by permission of Tomasz Herbich, Polish Academy of Science, the British Museum and the Egypt Exploration Society. Background image © Google Earth.

Excavations in Egypt are now multi-disciplinary, requiring the input of many specialists from different disciplines (see Box 1-B.). Especially important for Paleolithic investigations are lithic analysts because stone tools and the debris from their manufacture are the most frequently recovered artifacts. Ceramics become more frequent at sites dating after ca. 6000–5000 BC, and pharaonic sites can contain huge volumes of potsherds, which need to be studied by ceramic analysts. Philologists and Egyptologists are needed on excavations of pharaonic sites, and classical scholars on excavations of Greco-Roman sites. Highly trained specialists in different disciplines are also frequently needed, such as the nautical archaeologists who have studied the ship timbers at the pharaonic harbor of Mersa/Wadi Gawasis on the Red Sea (see Box 7-A).

Box 1-B The lost city of the pyramids at Giza

Since the late 1980s archaeologist Mark Lehner (Ancient Egypt Research Associates, AERA) has directed multidisciplinary investigations to the south and east of the Giza pyramids. Until this project began, almost nothing was known about the organization of the workers and the work program that produced the Giza pyramids. Evidence of the "Lost City" now provides much more social and economic information about the enormous undertaking of royal pyramid construction.

What has emerged in the excavations to the south of the enormous stone "Wall of the Crow" at Giza is the "Lost City," where a huge 4th-Dynasty production facility, with long narrow galleries, including evidence of paved streets, a large columned hall, a copper workshop, workers' housing, many storerooms, and state bakeries to feed the workers, was first excavated. Eastern and Western "Towns" have now been excavated with the residences of higher- and lower-status workers and their families. The most recent excavations include a re-examination of the small town associated with the monument of a 4th-Dynasty queen, Khentkawes, to the west of the "Lost City," and the structures connecting this town to the Menkaura Valley Temple, excavated by George Reisner in the early 20th century (see 6.6 and 6.7).

Geophysical prospecting to locate buried remains has been conducted with a magnetic gradiometer, and professional surveyors have mapped the different settlements. An osteo-archaeologist has excavated the much later human burials (26th Dynasty and later) and studied the human remains. Animal bones are studied by a zooarchaeologist, and botanical remains are examined by a paleo-ethnobotanist. Artifact analysis is done by lithics and ceramic analysts, and Associate Director John Nolan, an archaeologist and epigrapher, has studied the hieroglyphic impressions on the clay sealings found throughout the site.

The multidisciplinary AERA excavations are an example of how archaeology is now done in Egypt. Egyptian archaeologists and specialists in ceramic analysis and other fields have also been trained in AERA field schools – and are providing their newly acquired skills at other archaeological sites in Egypt.

Conservation and preservation of archaeological sites and artifacts are extremely important concerns in Egypt. Many archaeological projects are involved in the preservation, restoration, and reconstruction of ancient monuments and tombs. At major temples, such as that of Amen-Ra at Karnak, study and restoration of the architecture and reliefs were conducted throughout the 20th century and continue today. Specially trained artifact conservators are now often part of archaeological expeditions, and there are special projects to conserve and record tomb paintings, as well as reliefs and inscriptions in temples and tombs. Major projects to conserve ancient monuments in Egypt include archaeologists, epigraphers, and art historians, but also engineers, architects, geologists, and other specialists in cultural heritage management.

The Giza Sphinx is an example of a monument that has been restored over the past 3,500 years, with the most recent repairs done in the late 20th century. Stone monuments are increasingly threatened by salts in the ground water, and paintings in subterranean rock-cut tombs are especially vulnerable to environmental conditions. In western Thebes the tomb of Nefertari (see 8.9), the chief wife of Rameses II, was closed for most of the later 20th century because of the poor condition of its paintings, but it has now been preserved through a major restoration project by the Getty Conservation Institute and the Egyptian Antiquities Organization.

1.6 Archaeological Theory

One framework in which archaeology has been practiced in Egypt is that of culture history, which is reconstructed through the arrangement of the excavated material in a spatial and temporal context. This is basically a descriptive method to reconstruct the past in relation to a time sequence. Such archaeologists usually establish detailed chronologies, often composed of different periods with distinctive artifact styles for each phase.

With the development of processual archaeology in the 1960s, anthropologically trained archaeologists became interested in explaining social and economic changes in past cultures – the processes by which societies change – not just describing them. In processual archaeology, the natural, social, and political environments are often seen as significant factors in determining when and how changes occur. Economic factors, especially subsistence practices, technology, and demography, are also significant factors in sociocultural change. Archaeological evidence is interpreted within sociocultural systems – the institutions and organization of the ancient society as a whole. In theory, processual archaeologists are neo-evolutionists ("neo" differentiates them from evolutionists in 19th-century anthropology). They are interested in the process of socio-cultural and political evolution, from simple societies, such as the hunter-gatherers who lived in Egypt during Paleolithic times, to more complex ones, such as chiefdoms or the early state, which arose in Egypt during the fourth millennium BC. Processual archaeologists not only investigate such developments in particular places, such as Egypt, but also draw analogies with similar forms of change in socio-political organization in other parts of the world, to help elucidate such processes in Egypt (and elsewhere) and to build general theories.

Beginning in the 1980s, increasing criticism of processual theory developed among post-processual archaeologists and processual archaeology was criticized as being too environmentally deterministic. Although many processualists did take ritual, ideology, religions, and agency (the role of individuals, i.e., "agents") into account, the post-processualists believed that these and other aspects of human behavior, such as values and aesthetics, had been overlooked.

To better understand their data, archaeologists now use a number of theories, only a few of which are mentioned here. The role of royal agents in ancient Egypt is often evident in monuments and texts, which frequently contain historical data that were revised according to royal ideological agendas – the agency of power. But agency theory can be broader in scope: how did other individual agents operate in relation to the socio-political and physical environment of ancient Egypt? Some post-processualists are also interested in the archaeology of the mind and cognition: what is the meaning of the symbols on the artifacts and other evidence they excavate and what is the cultural grammar of this symbolism? Textual evidence, when available, can be especially relevant for such theory.

Post-processual landscape archaeology looks at the role of the ancient landscape, both natural and man-made, and the meaning of this – for the living and the dead. This is a particularly significant theoretical approach for understanding ancient Egyptian culture, since there are texts which give toponyms to natural features in the environment, such as mountains, and temples and cemeteries can often be understood within the context of the ceremonies that were performed there.

Lynn Meskell (Stanford University), who has studied evidence from the New Kingdom workmen's village at Deir el-Medina, proposes that the study of ancient social life requires an understanding of individuals, their identities (especially gender roles), and their bodies (see 8.11 and Box 8-E). Such theory, however, also requires very detailed data, both textual and archaeological, which are rarely all found at archaeological sites. Most of the people who lived in ancient Egypt were peasant farmers, whose settlements – and lives – remain invisible archaeologically. More recently, identity and personhood in ancient Egypt has been examined by Willeke Wendrich, as has gender in this early civilization, by Terry Wilfong. Ethnicity, as identified in the archaeological record, is also an important theoretical topic. Stuart Tyson Smith's studies of Egyptian and Nubian groups living together in Nubia in the New Kingdom are significant contributions to the broader topic (see 8.12).

1.7 Ancient Egypt and Egyptian Archaeologists in Fiction and Films

Ancient Egypt has not only been the focus of serious scholars. Hundreds of thousands of tourists have flocked to Egypt every year to see its monuments, and exhibitions displaying ancient Egyptian art and jewelry are very popular in major museums throughout the world. The widespread fascination with Egyptian mummies is a result of ancient Egyptian mortuary practices, which required well-preserved (but eviscerated) bodies, and the hieroglyphic texts associated with mortuary evidence are believed by many to hold mystical truths.

Because of such finds, ancient Egypt has frequently been the inspiration for fiction (including historical fiction), and films. The aim of most of these works is not accuracy, but entertainment.

Ancient Egypt at the movies includes several films about Cleopatra VII, usually as an exotic seductress. Theda Bara was an early Cleopatra (1917), andRussell Claudette Colbert also played the queen (1932). Vivien Leigh was Cleopatra in a film version of George Bernard Shaw's play *Caesar and Cleopatra* (1945; Figure 1.8), but probably the most famous movie Cleopatra was Elizabeth Taylor in the 1963 film, where she made love on and off the sets to Richard Burton's Marc Antony.

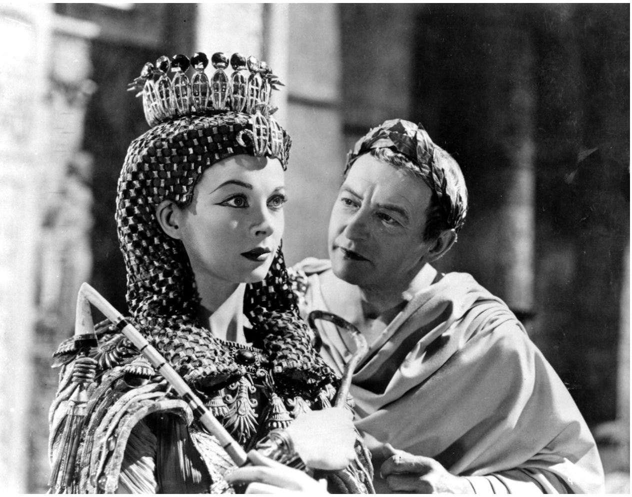


Figure 1.8 Vivien Leigh as Cleopatra (VII) with Claude Rains as Julius Caesar, in the 1945 film of the George Bernard Shaw play *Caesar and Cleopatra*.

Source: London Films/RGA.

The Ten Commandments, set in part in Rameses II's Egypt, has been the topic of two films by Cecil B. DeMille (1923 and 1956), and more recently a feature-length animated film *Prince of Egypt* (1998). Also from the 1950s are two notable films, *The Egyptian* (1954), based on the novel by Mika Waltari, and *Land of the Pharaohs* (1955).

Malevolent mummies, who miraculously come back to life and intimidate the living, have been a topic of fiction since Sir Arthur Conan Doyle's *Lot No. 249* (1892). Dozens of films have been made about such mummies, with Boris Karloff as the earliest well-known one (1932 and onward). Less dangerous mummies are found in *Abbott and Costello Meet the Mummy* (1955) and *I Was a Teenage Mummy* (1962 and 1992). Ramses the Damned, previously Ramses the Great (II), makes his appearance in Anne Rice's 1989 book *The Mummy*. In the 1999 film *The Mummy* and its 2001 sequel, an ancient Egyptian priest is unhappily (and quite impossibly) mummified alive, which creates great havoc several thousand years later.

Archaeologists working in Egypt have also been the subject of films. They appear in Robin Cook's 1979 book *Sphinx*, which has nothing to do with sphinxes, and in the 1981 film version. The movie inside the movie of Woody Allen's 1984 *Purple Rose of Cairo* begins with an adventurer-explorer (archaeologist?) in an Egyptian tomb, but he is quickly whisked off to Manhattan for a madcap weekend. Perhaps the most famous film archaeologist is Indiana Jones, who in the 1981 *Raiders of the Lost Ark* takes advantage of his university's liberal policy on academic leave to keep the Nazis from finding The Ark in their fairly informal excavations in Egypt. *Stargate* (1994) takes a somewhat naive Egyptologist to the other side of the universe where the Egyptian sun god Ra is up to no good.

The 19th-century Egyptologist Georg Ebers (1837–1898) also wrote novels set in Egypt, but is perhaps better known now for the medical papyrus named after him, which includes prescriptions for treating wrinkles and grey hair. An important novel of Thomas Mann's is *Joseph and His Brothers*, published first in German in 1933. Other works of historical fiction set in ancient Egypt include Pauline Gedge's books, the first of which is a romanticized novel about Queen Hatshepsut, *Child of the Morning* (1975). Norman Mailer’s 1983 novel *Ancient Evenings* is a very loose interpretation of Egyptian beliefs about the afterlife.

Agatha Christie’s 1944 mystery *Death Comes as the End* is based on real letters of an early 12th-Dynasty official named Hekanakht. Christie was married to Max Mallowan, a British archaeologist who worked in the Near East. She also set another of her mysteries, *Death on the Nile* (1937), in modern Egypt. More recently Elizabeth Peters (the pen name for Egyptologist Barbara Mertz) has published a highly successful series set in Edwardian England and Egypt, including *Crocodile on the Sandbank* (1975). Peters’s books revolve around the adventures of Amelia Peabody Emerson, an Egyptologist, archaeologist, and sleuth – and wife of an archaeologist whose character is freely based on Flinders Petrie.

Where do fantasy and fiction end, and how do archaeologists really work in Egypt? That, in part, is the subject of this book.

Chapter 2
Hieroglyphs, Language, and Pharaonic Chronology

Contents

2.1 Language of the Ancient Egyptians
2.2 Origins and Development of Egyptian Writing
2.3 Scripts and Media of Writing
2.4 Signs, Structure, and Grammar
2.5 Literacy in Ancient Egypt
2.6 Textual Studies
2.7 Use of Texts in Egyptian Archaeology
2.8 Historical Outline of Pharaonic Egypt
2.9 The Egyptian Civil Calendar, King Lists, and Calculation of Pharaonic Chronology

Introduction

Although only a small proportion of people learned to read and write in ancient Egypt, the society was a literate one. The writing system was deciphered beginning in 1822, and knowledge of Egyptian hieroglyphs opened up a previously inaccessible world of ancient beliefs and ideas. Surviving texts in hieroglyphs and cursive scripts greatly expand our knowledge of this early civilization. Some Egyptian texts are even informative about the thoughts and feelings of individuals – not only kings and elites, but also persons of lower status. Texts amplify, and sometimes contrast with, the archaeological evidence. The two forms of evidence complement each other and provide a fuller view of the ancient culture.

Texts are also an important source of information concerning over 3,000 years of Egyptian chronology. Historians have calculated lengths of reign from texts of king lists. When royal names appear in archaeological contexts, the associated evidence can be dated to specific reigns.

2.1 Language of the Ancient Egyptians

The ancient Egyptians spoke a language which is now called Egyptian. No one knows the correct pronunciation of this language, which in any event changed greatly over the course of several thousand years (as did the written language), and there were probably regional dialects and variations in pronunciation as well. The language is known only through its various written forms, the most formal of which is the pictorial script called hieroglyphic. The Greek word "hieroglyph" literally means "sacred writing," an appropriate term for a writing system that was used on the walls of temples and tombs, and which the Egyptians themselves called the "god's words."

Linguists classify languages by placing them in families of related languages, such as the Indo-European family, which includes English and many European and Asian languages. Ancient Egyptian is a branch of the language family called Afro-Asiatic (also known as "Hamito-Semitic"). Ancient languages of the Afro-Asiatic family, such as Egyptian, are known only from preserved written texts, whereas many Afro-Asiatic languages spoken in northern and eastern Africa and recorded in recent times have no earlier written form.

The Semitic languages form the most widely spoken branch of the Afro-Asiatic languages, and include ancient languages such as Akkadian (an "East Semitic" language spoken and written in ancient Mesopotamia, in a script called cuneiform, which means "wedge-shaped writing"), and Hebrew (one of the "Northwest Semitic" languages of Syria and Palestine, of the first millennium BC). Semitic languages spoken today include Arabic and Hebrew, as well as several languages of central and northern Ethiopia and Eritrea.

Other branches of the Afro-Asiatic language family include Cushitic, Berber, Chadic, and Omotic. These names relate to peoples and regions in Africa where these languages are spoken. Berber and Cushitic are geographically closest to Egypt. One of the Cushitic languages is Beja, which is spoken by nomadic peoples in the Eastern Desert, and has some close analogies to Egyptian.

2.2 Origins and Development of Egyptian Writing

Although Egyptian was certainly one of the languages spoken in the lower Nile Valley in prehistoric times, the first writing of the language did not appear until about 3200 BC. The earliest known hieroglyphs appear at the same time that a large state was consolidated and controlled by the first Egyptian kings. From the beginning the writing system had a royal context, and this is probably the setting in which writing was invented in Egypt. It used to be proposed that writing was first invented in Mesopotamia and then the idea of writing diffused to Egypt. The structure, scripts, media, and uses of the two writing systems, however, are very different, and it seems more likely that writing was invented independently in both Egypt and Mesopotamia.

In use for over 3,000 years during pharaonic and Greco-Roman times, spoken Egyptian changed through time (Figure 2.1). These changes are reflected to some extent in the written language (Figures 2.2 and 2.3). Early Egyptian is the earliest, formative stage of writing and dates to Dynasty 0 and the first three dynasties. The earliest hieroglyphs are found on artifacts from tombs: royal labels that were probably attached to grave goods, royal seals, and labels of high state officials. Hieroglyphs are also found on early royal ceremonial art, the most famous of which is the Narmer Palette (Figure 5.6). The use of these signs was not standardized. Writing at this time was used to record words as items of information rather than consecutive speech, with verbal sentences, syntax, etc., and the earliest writing remains incompletely understood because there simply is not enough material.

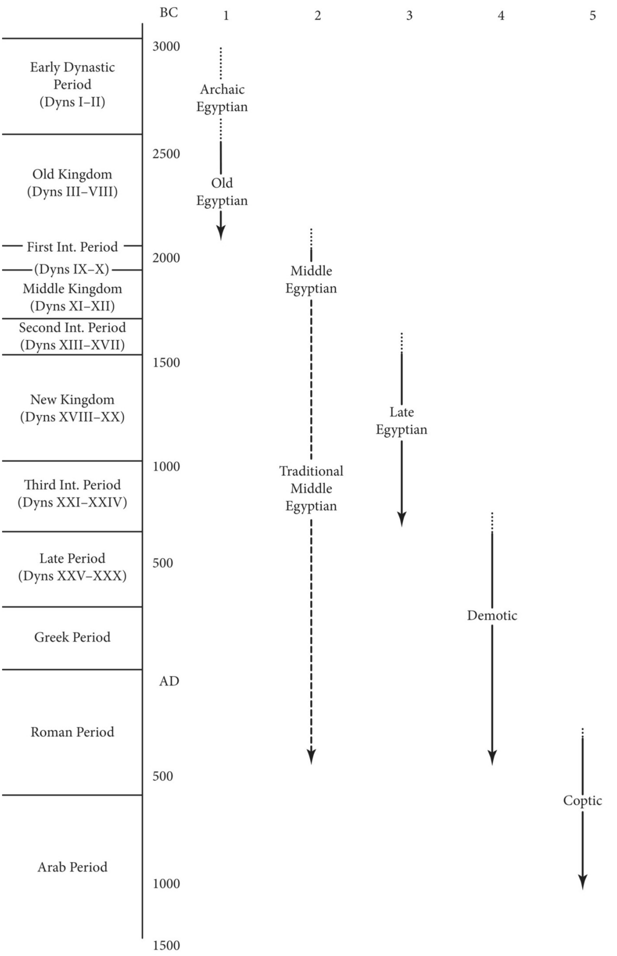

BC
1
2
3
4
5
3000
Early Dynastic Period (Dyns I–II)
Archaic Egyptian
2500
Old Kingdom (Dyns III–VIII)
Old Egyptian
First Int. Period (Dyns IX–X)
2000
Middle Kingdom (Dyns XI–XII)
Middle Egyptian
Second Int. Period (Dyns XIII–XVII)
1500
New Kingdom (Dyns XVIII–XX)
Late Egyptian
1000
Third Int. Period (Dyns XXI–XXIV)
Traditional Middle Egyptian
Late Period (Dyns XXV–XXX)
500
Demotic
Greek Period
AD
Roman Period
500
Coptic
Arab Period
1000
1500

Figure 2.1 Stages of the Egyptian language.

Source: Antonio Loprieno, *Ancient Egyptian: A Linguistic Introduction*. Cambridge: Cambridge University Press, 1995, p. 8. Reprinted by permission of Cambridge University Press.

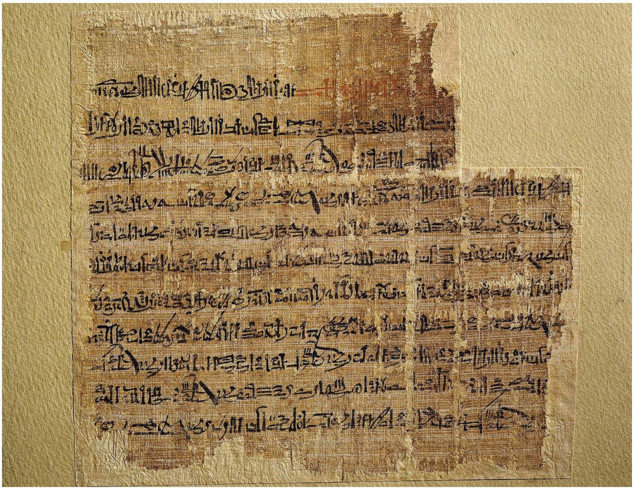


Figure 2.2 Fragmentary papyrus in hieratic about the Battle of Qadesh, fought by Rameses II in the 19th Dynasty (E. 4892).

Source: The Art Archive/Musée du Louvre Paris/Dagli Orti.

Many more texts are known from the Old Kingdom (4th–6th Dynasties), in a form of the written language known as Old Egyptian. In combination with scenes, hieroglyphic texts appear on the walls of tombs of private individuals, and in the later Old Kingdom, the earliest royal mortuary texts, known as the Pyramid Texts, are found in the inner chambers of pyramids. Full syntax was being written down at this time.

Middle Egyptian (also known as Classical Egyptian) is the written language of the Middle Kingdom (later 11th and 12th–13th Dynasties) and Second Intermediate Period. This is the classical period of ancient Egyptian literature, when literary texts such as the *Tale of the Shipwrecked Sailor* and the *Story of Sinuhe* were composed. Instructional texts in mathematics, medicine, and veterinary practice are known, as well as letters, legal documents, and government records. Religious texts were written in Middle Egyptian, not only in the Middle Kingdom, but also in later periods. Developing as part of the same large corpus as the late Old Kingdom Pyramid Texts, mortuary texts for private individuals were painted or incised on the sides of Middle Kingdom coffins, hence the term Coffin Texts. New Kingdom mortuary texts are also mainly in Middle Egyptian, including the so-called Book of the Dead (more correctly known as the Going Forth by Day) and the underworld books found on the walls of royal tombs. Approximately 700 different hieroglyphic signs were used to write Middle Egyptian (but no single text would ever be written with so many different signs).

Late Egyptian is the written language of the later New Kingdom (19th–20th Dynasties) and Third Intermediate Period. Although it had been spoken for a long time, Late Egyptian did not appear as a fully written language until later in the 18th Dynasty, during the reign of Akhenaten. The huge body of monumental texts on the walls of New Kingdom temples continued to be written in a form of Middle Egyptian. Numerous surviving government records include the account of a workers' strike, and many types of texts known earlier, such as literary works, letters, and medical and magical texts, are written in Late Egyptian.

Demotic is the written language (as well as a script) associated with the Late Period, beginning with the 26th Dynasty (664–525 BC), and it continued to be in use through Greco-Roman times. A large body of Demotic literature is known, especially narrative and instruction texts. The latest known use of Demotic is from a graffito at the temple of Philae, dating to AD 452.

The latest (and last) form of the ancient Egyptian language is Coptic, which began to be written in the 2nd century ad (Figure 2.3). Since hieroglyphs were associated with pagan temples and practices in Egypt, Egyptian-speaking Christians wrote in Coptic, using the Coptic alphabet, which was derived from the Greek alphabet, with the addition of a few letters derived from demotic script. The last hieroglyphs are from the late 4th century AD, after which knowledge of this ancient writing system was lost. Gradually after the Muslim conquest of Egypt in the 7th century, Arabic began to replace Coptic as the spoken and written language. Coptic continues to be used as the liturgical language of the Egyptian Coptic Church.

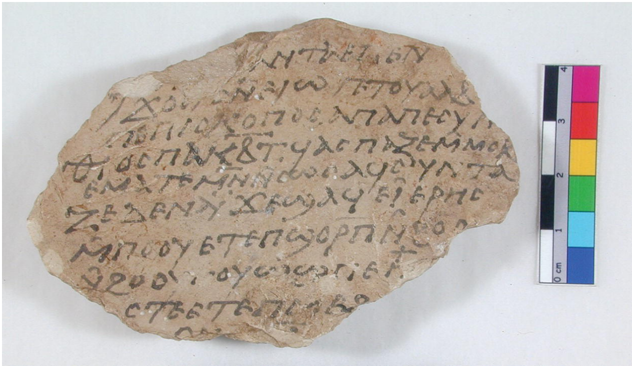


Figure 2.3 Limestone ostracon, with Coptic inscriptions on both sides, addressed to Psan, probably the disciple of Epiphanius, and naming Pesentius of Coptos/Qift.

Source: © Petrie Museum of Egyptian Archaeology, University College London UC62848.

2.3 Scripts and Media of Writing

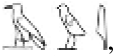
Ancient Egyptian was written in different scripts, depending on the media and the time period. Hieroglyphs are the pictographic signs that appeared from the earliest times when writing was invented in Egypt. Hieroglyphic signs never became abstract and were the most formal script, of symbolic importance for all monumental texts, both religious and mortuary. Hieroglyphic texts were carved on the walls, ceilings, and columns of stone temples, and on many types of artifacts. They were also painted or carved on the walls of tombs, and were used to record many religious texts on papyrus.

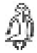
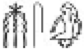
At the same time that early hieroglyphs were used, a more cursive and informal script now called hieratic developed. Written in ink and not carved, hieratic was easier to write than the pictographic hieroglyphs, and is a more abstracted form of these signs (Figure 2.2). Both hieratic and cursive hieroglyphs were used to write texts on papyrus. Records were also written in hieratic on ostraca, broken pieces of pottery or fragments of limestone. Plastered wooden boards were another writing medium, and administrative letters with hieroglyphs written vertically on clay tablets, using a bone stylus, have been excavated in the late Old Kingdom governor's palace at Balat, in Dakhla Oasis (see 6.12).

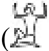
The demotic script, which developed in the first millennium BC, was a more cursive form of writing than hieratic. It contains many abbreviations, and has to be read in word groups more than individual signs. The middle text on the famous Rosetta Stone is in demotic, with a hieroglyphic text at the top and Greek at the bottom (Figure 1.1).

2.4 Signs, Structure, and Grammar

With hundreds of signs in use, Egyptian script is much more complex than alphabets, which were not invented in the Near East until the second millennium BC. Egyptian was first written vertically, and horizontal writing did not become the norm until the Middle Kingdom. Signs faced the direction from which they were read, usually from right to left. The script was written with no punctuation between clauses and sentences, and no spacing between words. The system does not write vowels, making it very difficult to reconstruct pronunciation, which is done primarily by working back from Coptic, in which vowels are written.

The use of different classes of hieroglyphic or hieratic signs in the same word made the decipherment of Egyptian much more difficult than it would have been for an alphabetic system. The simplest type of hieroglyphic sign is a logogram, with one sign representing a word, such as the sign representing the word for “sun.” Some signs (phonograms), many derived from logograms, were used phonetically to represent sounds in the spoken language, with one hieroglyph representing one, two, or three consonants (uniconsonantal, biconsonantal, or triconsonantal signs). Several uniconsonantal signs, , represent the so-called weak consonants, which were often omitted in writing. Although both biconsonantal and triconsonantal signs appear alone, they are often accompanied by one or two uniconsonantal signs, used as phonetic complements, so that the signs are not to be confused with logographic ones.

Determinative signs have no phonetic value and are placed at the end of a word, to graphically convey the general meaning of that word. For example, the determinative sign  depicts a woman giving birth. It is placed at the end of the verb *ms* , “to give birth."

There are also numerical signs in Egyptian hieroglyphs, which number from one ( ) to 1,000,000 ().

The basic word order of a sentence in Egyptian is: (1) verb, (2) subject (noun or pronoun), (3) direct object. In gender nouns are masculine or feminine, and in number they are singular, dual (for pairs, such as "two hands"), or plural. Adjectives follow the noun and agree in gender and number.

Egyptian verbal sentences can be compound and/or complex, with subordinate clauses, and there are numerous verb forms. There are also non-verbal sentences, in which the sentence structure itself links subject and predicate, and the verb "to be" was understood. Written continuously with no spaces between words or punctuation, individual sentences in texts can only be parsed by applying the rules of grammar. The ancient Egyptian language cannot be described in detail here, and more specific information about its structure can be found in the list of suggested readings.

In the process of translating Egyptian texts, Egyptologists often first transliterate the hieroglyphs or hieratic signs into letters of the Latin/Roman alphabet with spaces left between words. Diacritical marks are used for several consonants with a greater range of phonetic values than exist in European languages and a couple of special signs for consonants that those languages do not possess. The text is then translated into English or another language, which is accomplished with knowledge of the grammar of the form of the language in which the text was written. Even with such knowledge, ancient Egypt is a culture far removed in space and time from the modern world, and concepts expressed in Egyptian texts can remain obscure in meaning, especially in religious and mortuary texts.

Because of the complexities of the language and scripts – as well as the damaged condition of many texts – several years' training are required to attain full proficiency in ancient Egyptian. Many Egyptologists are full-time specialists in philology, and archaeologists of pharaonic period sites who do not have extensive training in philology need to work with such specialists. It is useful for all specialists of pharaonic Egypt to have some competence in the language – for a better understanding of the textual evidence and what the texts reveal about the culture.

2.5 Literacy in Ancient Egypt

Most people in ancient Egypt did not know how to read and write. Since the majority of Egyptians were peasant farmers, they would not have needed to learn to read, and the complexities of the written language would have made it more difficult to learn than most alphabetic writing systems. Although some members of the royal family and high-status individuals, as well as officials, priests, and army officers, were literate, scribes were needed for operations of the state at all levels.

Egyptian scribes were professionals trained in special schools in royal administrative departments and temples. Some scribes probably learned through apprenticeship, such as is known from the New Kingdom workmen's village of Deir el-Medina. Model letters recorded by schoolboys, on limestone ostraca and plaster-covered wooden boards, have been found which give us information about what was taught in these schools or to apprentices in jobs. A well-known Middle Egyptian text attributed to the scribe Khety extols the virtues of being a scribe, who will always have employment. He boasts that scribes do not have to wear rough garments like common laborers, and they can take baths. Scribes give orders and others have to obey them.

Scribes were needed for the bureaucratic functions of all branches of the government and administration, including issuing the rations for government personnel and workers who depended on state resources for their livelihood. Tax collection and operations of the treasury needed to be recorded, as did organizing and supplying the personnel for expeditions outside of Egypt – for mining and quarrying, trade, and warfare. Scribes were also used for large-scale state work projects such as pyramid building.

Probably the most visible evidence of writing in ancient Egypt is the hieroglyphic texts found on the walls of temples and tombs, both royal and private. These were the work of artisans who worked with scribes and/or literate artisans. Religious and mortuary texts were written and read by scribally trained priests, and scribes were needed for the construction and operation of temples. Legal proceedings, both local and national, were recorded by scribes. Wealthy private individuals needed scribes to administer their estates and to record documents such as wills and business transactions.

2.6 Textual Studies

The decipherment of Egyptian opened the way to recovering an understanding of the Egyptian language in all of its stages and scripts. An enormous undertaking (which continues in the present) was to record texts of all types for study. After the early 19th-century expeditions, Egyptologists such as Auguste Mariette, Heinrich Brugsch, Émile Chassinat, and Johannes Dümichen continued to record and publish Egyptian inscriptions from major temples, such as Edfu and Dendera. Chassinat published the Edfu temple inscriptions in eight volumes, while publication of the Dendera temple inscriptions continues in the present, by Sylvie Cauville. A monumental project to record Egyptian tombs for the Egypt Exploration Fund (EEF) was undertaken at several sites in Middle Egypt by Norman de Garis Davies (1865–1941) and Percy Newberry (1869–1949). Their work is especially valuable today because many of these tombs are in such a poor state of preservation. James Henry Breasted's compilation of ancient Egyptian historical records later led to the Oriental Institute's Epigraphic Survey, which continues in the present (see 1.4).

At the same time progress on understanding the structure and grammar of ancient Egyptian was also being made, mainly in European universities. Adolf Erman (1854–1937) was the first Egyptologist to divide the language into Old, Middle, and Late Egyptian. His translations, as well as those of Heinrich Brugsch (1827–1894), are recognized as the first generally reliable ones. Important contributions in hieratic and demotic were made by Francis Llewellyn Griffith, and in demotic and Coptic by Wilhelm Spiegelberg (1870–1930). Erman was also responsible, along with Hermann Grapow (1885–1967), for the publication of an eleven-volume Egyptian dictionary (1926–1963). Another German scholar, Kurt Sethe (1869–1934), published vast numbers of texts and made impressive contributions in his studies of the Egyptian verbal system, the most complex aspect of the written language.

Alan H. Gardiner's *Egyptian Grammar* (1927) continues to be a major work for the study of the classical period of the Egyptian language (Middle Egyptian), but more recently two Middle Egyptian grammars have been published by James Allen (2001) and James Hoch (1997). Hans Polotsky's 1944 study of Coptic syntax has also had major implications for the study of Egyptian. Work on understanding the Egyptian language and the meanings of ancient texts and words continues to be a very lively area of Egyptology.

2.7 Use of Texts in Egyptian Archaeology

Texts greatly expand our knowledge of ancient Egypt, but they do not give a full view of the culture. Except for the king, high officials, and other persons of high status, socio-economic information about the majority of Egyptians is generally absent from texts. Egyptians believed in the importance of burial, and the participation of many people in yearly religious festivals is well attested. But the personal beliefs of the peasant farmers and their families are not well known.

Texts do not inform us about how effective the ideology of state religion (and its divine king) was in the lives of the average Egyptian, and this can only be gauged through their complicity and participation in the erection of monuments to the king and state gods. The very largest state projects which still impress us, such as the Great Pyramid at Giza, required the conscription, organization, supplying, feeding, housing, and clothing of thousands of workers. But the political and economic organization of the state was probably a much more significant factor for the marshalling of such a labor force than any ideological zeal of the workers for their god-king, about which we know almost nothing.

Textual information is also dependent on what has been preserved over the millennia. Even in such a dry climate as the deserts to either side of the Nile Valley, organic materials used for writing (papyrus, wooden boards, and linen) were much more fragile than inorganic ones. Texts and monuments were often intentionally erased or destroyed, and it was a frequent practice of later kings to usurp or add to the inscriptions of earlier ones. In post-pharaonic times when many sites were abandoned, materials from these sites, including artifacts with textual evidence, were sometimes reused or destroyed – such as the systematic destruction of sacred sites by Christians and early Muslims.

Tomb robbing has been common from ancient to modern times. Most of the Old Kingdom pyramids were probably robbed after the collapse of the state in the First Intermediate Period, and royal tombs of the New Kingdom were robbed during the 20th Dynasty. Unfortunately, tomb robbing has continued into modern times, especially with the rising value of Egyptian artifacts on the international antiquities market. Thus the surviving textual evidence from Egypt, including that of a mortuary nature, is only a very small percentage of what existed at any one period in antiquity.

What textual information has survived is also highly specialized in the information that it conveys. The farther back we go in Egyptian history, the sparser the textual information. Moreover, the early writing, from the 1st, 2nd, and 3rd Dynasties, is poorly understood. Although the Giza pyramids are examples of the great accomplishments of Egyptian engineers and architects, there are no texts explaining how these buildings were designed or constructed, and most texts from this period have a mortuary context. But clay sealings and pot marks of kings from the earliest dynasties and later periods are often preserved. If carefully excavated, these sealings and pot marks can be used to date the associated archaeological evidence to the reigns of specific kings, and also provide information about administration and ritual.

Beginning with the Middle Kingdom much more textual information is available than from earlier periods, including letters, government records, and literary texts (some of which are only known in surviving copies from later periods). From the New Kingdom, when there is better preservation of stone cult temples and royal mortuary temples, there are many historical inscriptions. These, of course, present a biased and self-serving perspective. For example, the amount of booty and tribute from Egypt’s conquests abroad was often exaggerated. Ideology dictated that the divine king had to be portrayed as victorious in battle, even when that had hardly been the case. Thus historical fact was revised to idealize the role of the king.

Given that so much textual information from ancient Egypt is lost, and archaeological evidence is always fragmentary, it is important that all available evidence be analyzed within the context in which it was found. Textual evidence is not to be understood simply as factual and needs to be interpreted within its historical and archaeological contexts. Texts add information to archaeological investigations that can be obtained in no other way, such as more specific ranges of dates than are possible with radiocarbon dating (see Box 4-B). Inscriptions are found on many types of artifacts, such as scarabs and servant figures (*shawabti*), and the names of kings and high officials are stamped on mud-bricks from some New Kingdom sites. Cartouches of kings can sometimes be identified even on fragmentary reliefs and stelae, or impressed on pottery and seals. Thus texts provide much cultural information (often relevant for dating, as well as more specific information about the site) that would not be available otherwise.

Although they were written for elites, the mortuary texts on the walls of tombs and the religious texts on the walls of temples provide much information about beliefs and cult practices that we would not have solely from archaeological evidence. Along with their accompanying scenes, such texts are high in information content and provide a window into ancient Egyptian ideology.

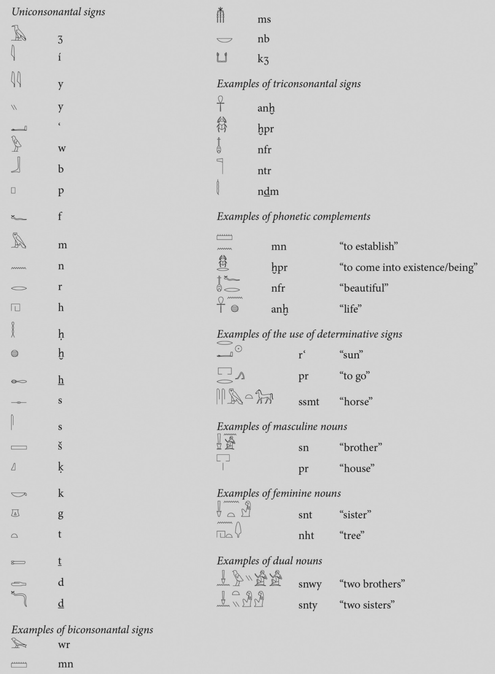
2.8 Historical Outline of Pharaonic Egypt

Dating is one of the most basic concerns in archaeology, and texts of ancient Egyptian king lists are an invaluable source of information for dating pharaonic evidence. King lists must have been available to Manetho, a 3rd-century BC Egyptian priest who first devised a system of 31 dynasties for the almost 3,000 years of pharaonic history. Although modern scholars have demonstrated problems with Manetho's sequence, which is only preserved in later excerpts, its basic divisions are still followed. Manetho's dynasties span the time from the beginning of pharaonic history in the 1st Dynasty (ca. 3000 BC) to the end of the domination of Egypt by the Persian Empire, when Egypt was conquered by Alexander the Great (332 BC). Although some dynasties in Manetho's list correspond to a new ruling family, this is not true for every dynasty.

In the later 19th century, when Egyptian textual and monumental evidence became available to scholars, pharaonic chronology was divided into several major periods ("kingdoms"), when the large territorial state was unified and centrally controlled by a king. These periods are called the Old, Middle, and New Kingdoms. The earliest period of pharaonic civilization consists of the 1st and 2nd Dynasties, now called the Early Dynastic Period (ca. 3000–2686 BC), known as the Archaic Period in earlier histories. Preceding the 1st Dynasty is Dynasty 0, which was first proposed by Werner Kaiser in the 1960s. Kaiser's hypothesis was later confirmed by excavations of the German Archaeological Institute at Abydos, where tombs of kings who preceded the 1st Dynasty have been identified.

In most periodizations the Old Kingdom consists of the 3rd through 6th Dynasties (ca. 2686–2181 BC). The Middle Kingdom begins with the reunification of Egypt under King Nebhepetra Mentuhotep II of the later 11th Dynasty, and spans the 12th and 13th Dynasties (ca. 2055–1650 BC). The New Kingdom, the age of Egypt's empire abroad, spans the 18th through 20th Dynasties (ca. 1550–1069 BC). The 19th and 20th Dynasties are sometimes called the Ramessid Period because many of the kings of these dynasties were named Rameses. The dates used in this book are those found in *The Oxford History of Ancient Egypt*, ed. Ian Shaw (2000) (see Box 2-C).

Box 2-A Hieroglyphic signs



Uniconsonantal signs

ꜣ
í
y
y
‘
w
b
p
f
m
n
r
h
ḥ
ḫ
ẖ
s
s
š
ḳ
k
g
t
ṯ
d
ḏ

Examples of biconsonantal signs

wr
mn
ms
nb
kꜣ

Examples of triconsonantal signs

anḫ
ḫpr
nfr
ntr
nḏm

Examples of phonetic complements

mn	“to establish”
ḫpr	“to come into existence/being”
nfr	“beautiful”
anḫ	“life”

Examples of the use of determinative signs

r‘	“sun”
pr	“to go”
ssmt	“horse”

Examples of masculine nouns

sn	“brother”
pr	“house”

Examples of feminine nouns

snt	“sister”
nht	“tree”

Examples of dual nouns

snwy	“two brothers”
snty	“two sisters”

Box 2-B Decipherment of Egyptian

Renaissance scholars who tried to decipher Egyptian hieroglyphs were misled by ancient Greek historians, who believed that the signs were symbolic and not phonetic. But some progress was made in the late 18th century by Georg Zoëga, a scholar of Coptic manuscripts who compiled a corpus of hieroglyphic signs. Decipherment was greatly aided by the 1799 discovery of the Rosetta Stone in Rashid (ancient Rosetta) in the Nile Delta by French soldiers digging fortifications. In Cairo French *savants* of the Napoleonic expedition soon recognized that the stone was bilingual, in Egyptian and Greek. The French circulated copies of the Rosetta Stone before it was surrendered to the British after Napoleon’s defeat in Egypt (it is now in the British Museum in London).

The Rosetta Stone is a stela dating to 196 BC, in the reign of Ptolemy V Epiphanes. It was written in three scripts: Egyptian hieroglyphs at the top (the least well-preserved part), demotic in the middle, and a Greek translation at the bottom. The inscription records a decree of the General Council of Egyptian priests in the city of Memphis. Titles and epithets of the king are given, as are royal benefactions following the king's coronation, such as gifts to temples and remission of taxes and debts. The priests reciprocated by honoring the king in temples.

By 1802 translations of the Greek text on the Rosetta Stone had appeared, and the first studies of the demotic text were done by a French scholar, Baron Sylvestre de Sacy (1758–1838). His student, the Swedish diplomat Johan Åkerblad (1763–1819), correctly identified proper names in the demotic text, and made a list of 29 demotic alphabetic signs, about half of which were correct. But Åkerblad thought that all demotic signs were alphabetic, and he got no further in decipherment.

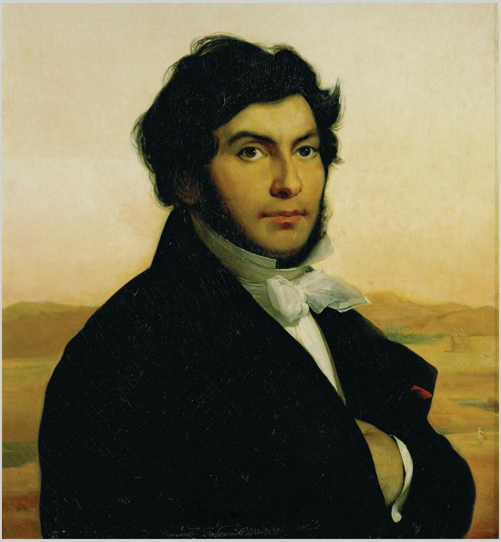


Figure 2.4 Jean-François Champollion (1790–1832). Painting from 1831 by Leon Cogniet, INV. 3294 Paris, Musée du Louvre.

Source: akg-images/Erich Lessing.

A major breakthrough was made in 1814 by the English scholar and linguist Thomas Young (1773–1829). Young was also a practicing physician and did research on physiological optics, discovering the undulatory theory of light in 1802. Working first with a copy of the Rosetta Stone, Young later studied monumental inscriptions recorded in the *Description de l'Égypte* (see Box 1-A). Young recognized that Egyptian writing was a mix of different types of signs, and that the demotic script was related to the hieroglyphs. Although on the brink of deciphering Egyptian with his 1819 publication of a list of alphabetic signs, Young did not fully succeed because of his belief that the signs were mainly symbolic, with only limited phonetic components.

Jean-François Champollion is credited with deciphering ancient Egyptian because he was the first to prove, by systematic analysis, that the hieroglyphic writing system was significantly phonetic. Working with a copy of a bilingual text in Greek and Egyptian hieroglyphs, from an obelisk brought to England by the traveler W. J. Bankes (1786–1855), Champollion recognized the phonetic values of signs in two cartouches, of the rulers Ptolemy and Cleopatra. He then identified the phonetic values of more Egyptian hieroglyphs from copies of temple inscriptions, expounding his discovery in the famous "Lettre à Monsieur Dacier" in 1822. In his 1824 *Précis of the Hieroglyphic System* (*Précis du système hiéroglyphique*), Champollion made a classified list of Egyptian signs, and formulated a system of grammar and general decipherment, which laid the foundation for all Egyptological studies of the last two centuries. Champollion's great achievement built upon his knowledge of Coptic, which helped him to identify many hieroglyphic signs and their phonetic values from their Coptic equivalents. But Champollion did not identify multiconsonantal signs, which was subsequently accomplished by Carl Richard Lepsius.

Box 2-C Pharaonic chronology

Dates given here are from *The Oxford History of Ancient Egypt*, edited by Ian Shaw (2000). There is no general agreement on exact dates before the 26th Dynasty, and dates of reigns and dynasties can vary in different modern sources.

The spellings of kings' names can also vary in modern books. Name forms used here are taken from Shaw's book. The kings' names listed here are also selective and not comprehensive, especially for the intermediate periods.

Dynasty 0, ca. 3100–3000 BC, including:

Iry-Hor(?)

Ka

Scorpion

Narmer

Early Dynastic Period, ca. 3000–2686 BC

1st Dynasty, ca. 3000–2890 BC:

Aḥa

Djer

Djet

Queen Merneith

Den

Anedjib

Semerkhet

Qa'a

2nd Dynasty, ca. 2890–2686 BC:

Hetepsekhemwy

Raneb

Nynetjer

Weneg

Sened

Peribsen

Khasekhemwy

Old Kingdom, ca. 2686–2181 BC

3rd Dynasty, ca. 2686–2613 BC:

Djoser

Sekhemkhet

Khaba

Sanakht(?)

Huni

4th Dynasty, ca. 2613–2494 BC:

Sneferu

Khufu

Radjedef (Djedefra)

Khafra

Menkaura

Shepseskaf

5th Dynasty, ca. 2494–2345 BC:

Userkaf

Sahura

Neferirkara

Shepseskara

Raneferef

Nyuserra

Menkauhor

Djedkara Izezy

Unas

6th Dynasty, ca. 2345–2181 BC:

Teti

Userkara

Pepy I

Merenra

Pepy II

Queen Nitiqret

First Intermediate Period, ca. 2181–2055 BC

7th and 8th Dynasties, ca. 2181–2160 BC:

About 15 kings

9th and 10th Dynasties (a selection), ca. 2160–2025 BC:

Khety (Meryibre)

Khety (Nebkaura)

Khety (Wahkara)

Merykara

11th Dynasty, pre-unification, ca. 2125–2055 BC:

Intef I, 2125–2112

Intef II, 2112–2063

Intef III, 2063–2055

Middle Kingdom, ca. 2055–1650 BC

11th Dynasty in a unified Egypt, ca. 2055–1985 BC:

Nebhepetra Mentuhotep II

Sankhkara Mentuhotep III

Nebtawyra Mentuhotep IV

12th Dynasty, ca. 1985–1773 BC:

Amenemhat I

Senusret I

Amenemhat II

Senusret II

Senusret III

Amenemhat III

Amenemhat IV

Queen Sobekneferu

13th Dynasty (a selection), ca. 1773–1650 BC:

Wegaf

Sobekhotep II

Iykhernefert Neferhotep

Ameny-intef-amenemhat

Hor

Khendjer

Sobekhotep III

Neferhotep I

Sahathor

Sobekhotep IV

Sobekhotep V

Ay

Second Intermediate Period

14th Dynasty

Minor kings probably contemporary with the 13th or 15th Dynasty

15th Dynasty, ca. 1650–1550 BC; six kings, including:

Salitis

Khyan

Apepi

Khamudi

16th Dynasty, ca. 1650–1580:

Theban rulers contemporary with the 15th Dynasty

17th Dynasty, ca. 1580–1550 BC:

Rahotep

Sobekemsaf I

Intef VI

Intef VII

Intef VIII

Sobekemsaf II

Siamen(?)

Taa

Kamose

New Kingdom, ca. 1550–1069 BC

18th Dynasty, ca. 1550–1295 BC:

Ahmose, 1550–1525

Amenhotep I, 1525–1504

Thutmose I, 1504–1492

Thutmose II, 1492–1479

Thutmose III, 1479–1425

Queen Hatshepsut, 1473–1458

Amenhotep II, 1427–1400

Thutmose IV, 1400–1390

Amenhotep III, 1390–1352

Amenhotep IV/Akhenaten, 1352–1336

Neferneferuaten/Smenkhkara, 1338–1336

Tutankhamen, 1336–1327

Ay, 1327–1323

Horemheb, 1323–1295

19th Dynasty, ca. 1295–1186 BC:

Rameses I, 1295–1294

Sety I, 1294–1279

Rameses II, 1279–1213

Merenptah, 1213–1203

Amenmessu, 1203–1200(?)

Sety II, 1200–1194

Saptah, 1194–1188

Queen Tausret, 1188–1186

20th Dynasty, ca. 1186–1069 BC:

Sethnakht, 1186–1184

Rameses III, 1184–1153

Rameses IV, 1153–1147

Rameses V, 1147–1143

Rameses VI, 1143–1136

Rameses VII, 1136–1129

Rameses VIII, 1129–1126

Rameses IX, 1126–1108

Rameses X, 1108–1099

Rameses XI, 1099–1069

Third Intermediate Period, ca. 1069–664 BC

21st Dynasty, ca. 1069–945 BC:

Smendes, 1069–1043

Amenemnisu, 1043–1039

Psusennes I, 1039–991

Amenemope, 993–984

Osorkon the Elder, 984–978

Siamen, 978–959

Psusennes II, 959–945

22nd Dynasty, ca. 945–715 BC:

Sheshonq I, 945–924

Osorkon I, 924–889

Sheshonq II, ca. 890

Takelot I, 889–874

Osorkon II, 874–850

Takelot II, 850–825

Sheshonq III, 825–773

Pimay, 773–767

Sheshonq V, 767–730

Osorkon IV, 730–715

23rd Dynasty, ca. 818–715 BC:

Rulers in various centers who were contemporary with the late 22nd, 24th, and 25th Dynasties

Pedubastis I

Iuput I

Sheshonq IV

Osorkon III

Takelot III

Rudamen

Peftjauawybast

Iuput II

24th Dynasty, ca. 727–715 BC:

Bakenrenef, 720–715

25th Dynasty, ca. 747–656 BC:

Piy/Piankhy, 747–716

Shabaqo, 716–702

Shabitqo, 702–690

Taharqo, 690–664

Tanutamani, 664–656

Late Period, 664–332 BC

26th Dynasty, 664–525 BC:

Nekau I, 672–664

Psamtek I, 664–610

Nekau II, 610–595

Psamtek II, 595–589

Apries, 589–570

Ahmose II/Amasis, 570–526

Psamtek III, 526–525

27th Dynasty (Persian kings), 525–404 BC:

Cambyses, 525–522

Darius I, 522–486

Xerxes I, 486–465

Artaxerxes I, 465–424

Darius II, 424–405

Artaxerxes II, 405–359

28th Dynasty, 404–399 BC:

Amyrtaios, 404–399

29th Dynasty, 399–380 BC:

Nepherites I, 399–393

Achoris, 393–380

Nepherites II, ca. 380

30th Dynasty, 380–343 BC:

Nectanebo I, 380–362

Teos/Tachos, 362–360

Nectanebo II, 360–343

31st Dynasty (Persian kings), 343–332 BC:

Artaxerxes III, 343–338

Arses, 338–336

Darius III, 336–332

Khababash (last known Egyptian ruler)

Ptolemaic Period, 332–30 BC

Macedonian Dynasty, 332–305 BC:

Alexander III (the Great), 332–323

Philip Arrhidaeus, 323–317

Alexander IV, 317–305

Ptolemaic Dynasty, 305–30 BC:

Ptolemy I Soter I, 305–285

Ptolemy II Philadelphus, 285–246

Ptolemy III Euergetes I, 246–221

Ptolemy IV Philopator, 221–205

Ptolemy V Epiphanes, 205–180

Ptolemy VI Philometor, 180–145

Ptolemy VII Neos Philopator, 145

Ptolemy VIII Euergetes II, 170–116

Ptolemy IX Soter II, 116–107

Ptolemy X Alexander I, 107–88

Ptolemy XI Alexander II, 80

Ptolemy XII Neos Dionysos (Auletes), 80–51

Cleopatra VII Philopator, 51–30

Ptolemy XIII, 51–47

Ptolemy XIV, 47–44

Ptolemy XV Caesarion, 44–30

Roman Period, 30 bc–ad 395

Augustus, 30 bc–ad 14

Tiberius, AD 14–37

Gaius/Caligula, 37–41

Claudius, 41–54

Nero, 54–68

Galba, 68–69

Otho, 69

Vespasian, 69–79

Titus, 79–81

Domitian, 81–96

Nerva, 96–98

Trajan, 98–117

Hadrian, 117–138

Antoninus Pius, 138–161

Marcus Aurelius, 161–180

Lucius Verus, 161–169

Commodus, 180–192

Septimius Severus, 193–211

Caracalla, 198–217

Geta, 209–212

Macrinus, 217–218

Didumenianus, 218

Severus Alexander, 222–235

Gordian III, 222–235

Philip, 238–242

Decius, 249–251

Gallus and Volusianus, 251–253

Valerian, 253–260

Gallienus, 253–268

Macrianus and Quietus, 260–261

Aurelian, 270–275

Probus, 276–282

Diocletian, 284–305

Maximian, 286–305

Galerius, 293–311

Constantius, 293–306

Constantine I, 306–337

AD 395 is the beginning of the Byzantine/Coptic Period, with the division of the empire into East and West.

In 2010 a new radiocarbon-based chronology for Dynastic Egypt (see Box 4-B) was published by an international team of scientists headed by Christopher Bronk Ramsey of the Research Laboratory for Archaeology and the History of Art, University of Oxford. The new chronology used measurements of 211 samples from short-lived plants with a statistical model incorporating reign lengths of ancient Egyptian kings, pointing to an offset of 19 radiocarbon years older. Thus the new study places the Old Kingdom (3rd Dynasty) beginning between 2691 and 2625 BC, the Middle Kingdom (reign of Mentuhotep II) beginning between 2064 and 2019 BC, and the New Kingdom (18th Dynasty) beginning between 1570 and 1544 BC.

Conventionally the periods of political division between the Old, Middle, and New Kingdoms are called “intermediate” periods. The First Intermediate Period, between the Old and Middle Kingdoms, consists of the 7th through 10th Dynasties, and the earlier 11th Dynasty (ca. 2181–2055 BC). The 7th and 8th Dynasties (ca. 2181–2060 BC) were a short period of about 20–25 years in which a number of kings reigned in the north for a couple of years each. The 9th and 10th Dynasties represent kings whose power base was at Herakleopolis in the Faiyum region, hence this period is sometimes called the Herakleopolitan Period (ca. 2160–2025 BC). The largely concurrent 11th Dynasty (ca. 2160–2025 BC) arose at Thebes and eventually controlled all of Egypt.

The Second Intermediate Period, between the Middle and New Kingdoms, consists of the 15th through 17th Dynasties (ca. 1650–1550 BC). The minor kings of the 14th Dynasty located in the Delta may have been contemporary with either the 13th or the 15th Dynasty. This was a time of divided rule in Egypt, with the Hyksos, ethnically foreign kings of the 15th Dynasty whose origins were in Palestine, controlling northern Egypt, and Egyptian kings of the 16th/17th Dynasties in the south. Later kings of the 17th Dynasty, whose power base was at Thebes, eventually fought northward and ended Hyksos rule there.

The Third Intermediate Period, after the end of the New Kingdom, consists of the 21st through 25th Dynasties (ca. 1069–664 BC). The 21st Dynasty established a new capital at Tanis in the northeastern Delta, while a theocracy ruled by a general, who was also high priest of Amen, controlled the south from Thebes. A later king of the 21st Dynasty (Osorkon the Elder), was the son of a Libyan chief in the Delta, and the kings of the 22nd Dynasty were acculturated Egyptian-Libyans, who attempted to reassert control over all of Egypt. But local rulers of the 23rd and 24th Dynasties also asserted their authority in various centers in the Delta. These dynasties partially overlap in time with the 22nd and 25th Dynasties. The 25th Dynasty (ca. 747–656 BC) is sometimes called the Kushite Dynasty because Egypt and Nubia were controlled by kings of Kush, a kingdom which developed to the far south of Egypt, centered between the Third and Sixth Cataracts of the Nile.

The Late Period consists of the 26th through 31st Dynasties (664–332 BC). In the 26th Dynasty (664–525 BC) Egypt was reunified under kings whose capital was at Sais in the Delta, hence the term Saite Dynasty. In the 27th Dynasty (525–359 BC) Egypt was conquered by Persians of the Achaemenid kingdom whose capital was at Persepolis, in what is now southwestern Iran. The 28th, 29th, and 30th Dynasties (404–343 BC) were a period of successful rebellion against Persian control, and the 31st Dynasty (343–332 BC) is when Persian control was briefly re-established in Egypt.

Destroying the Persian Empire, Alexander the Great of Macedon conquered Egypt in 332 BC. After Alexander's death in Babylon in 323 BC his empire fell apart. The Ptolemaic Dynasty (305–30 BC) followed when Ptolemy, one of Alexander's generals, assumed control in Egypt in 323 BC, becoming its first king in 305 BC. The last Ptolemaic ruler was Cleopatra VII (51–30 BC). After her suicide Egypt became a Roman province during what is called the Roman Period (from 30 BC onward). The nominal end of the Roman Period was in AD 395, when the Roman Empire was divided into the East (Byzantine, including Egypt) and West. The combined periods of Ptolemaic and Roman rule are often called the Greco-Roman Period.

The Roman emperors, who seldom visited the country, supported Egyptian religion. Temples for the cults of Egyptian gods (and the emperor as pharaoh) were built during these times and covered with reliefs of the gods and hieroglyphic texts. Egyptian mortuary practices continued as well.

With Rome's adoption of Christianity in the 4th century AD and its spread though Roman provinces, ancient Egyptian religion and the elaborate beliefs surrounding burial gradually ceased to be tolerated. The Coptic Period (also known as the Byzantine Period), from the early 4th century until the Muslim conquest of Egypt in AD 641, represents the true end of ancient Egyptian civilization. Ancient Egyptian beliefs came to be characterized as pagan, as did the most visible manifestations of ancient culture – the elaborate tombs and temples, and the cult of the god-king.

2.9 The Egyptian Civil Calendar, King Lists,

and Calculation of Pharaonic Chronology

Calculation of pharaonic chronology is dependent on knowledge of the methods the ancient Egyptians used to reckon time and record years. Their year had 360 days. Five days “above the year” were added on to make a 365-day year, representing approximately the annual solar cycle. This is called the Egyptian civil calendar because it was used for purposes of the state, such as tax collection and recording the years of a king’s reign. In this calendar, however, there was no calculation of a “leap year” day added on every four years. As a result, the civil calendar moved slowly forward through the real cycle of the year.

An older calendar based on the cycles of the moon had three seasons of four months each (of 29–30 days). The lunar calendar was connected to an important sidereal event, the observation in the east just before dawn of the dog-star Sirius (personified by the Egyptian goddess Sopdet/Sothis), after it was hidden for a period of 70 days. This was New Year’s Day in the lunar calendar, at the same time of year as the annual Nile inundation. Although the civil calendar was used by the state, the lunar calendar was used for determining the dates of some religious festivals and rituals.

In the Egyptian civil calendar years were not fixed from one set point in history as in our own calendar, but were numbered by the regnal year of the reigning king. When they have survived, dates on documents are given by the regnal year of a king, the number of the month of the season, and the number of the day; for example, “Year 6, month 3 of the season of inundation, day 5 (of King X).” The king’s name is often omitted because it was obvious to the writer and user of the document.

Several king lists that have survived into modern times, as well as Manetho’s *History of Egypt*, are the basis for converting regnal years of Egyptian kings into years BC. The earliest relevant document is the Palermo Stone, so called because the largest of several fragments of this inscribed stone is now in a museum in Palermo, Sicily. The Palermo Stone was probably carved in the mid-5th Dynasty. It records the semi-mythical and/or unknown Predynastic kings, who cannot be verified from archaeological evidence, as well as kings from the 1st to 5th Dynasties. Beginning in the 4th Dynasty, the years recorded on the Palermo Stone are numbered in relation to a biennial (and sometimes annual) cattle census conducted for purposes of taxation during the reign of each king, not the number of years of a king's reign, which were not used until late in the Old Kingdom.

Although not very legible, another Old Kingdom king list has been identified on a basalt slab that was recycled to make the lid of the sarcophagus of Queen Ankhenespepy III, a wife of Pepy II. The lid was found at South Saqqara during Gustave Jéquier's excavations in 1931–1932, but the king list was not recognized until 1993, during a visit to the Cairo Museum by French Egyptologists Michel Baud and Vassil Dobrev. Inscribed on this stone is a king list from the reign of the 6th-Dynasty king Merenra, who preceded his brother Pepy II on the throne.

Probably the most important later king list is the Turin Canon, a fragmentary 19th-Dynasty papyrus now in the Egyptian Museum in Turin, Italy. One side of the papyrus records tax receipts, and the king list is on the back, listing kings from the beginning of the Dynastic period (as well as reigns of the gods and "spirits" in a mythical past) through the Second Intermediate Period. Also from the 19th Dynasty is Sety I's king list carved on his temple at Abydos (Figure 2.5). Many kings of the First and Second Intermediate Periods are absent from Sety I's list, as are rulers who were considered illegitimate (Queen Hatshepsut, and the late 18th-Dynasty kings of the Amarna Period). Carved on the walls of temples, such king lists should not be considered as a historical record, but as a form of ancestor veneration by the living king, who traced his legitimacy back through a very long line of predecessors.

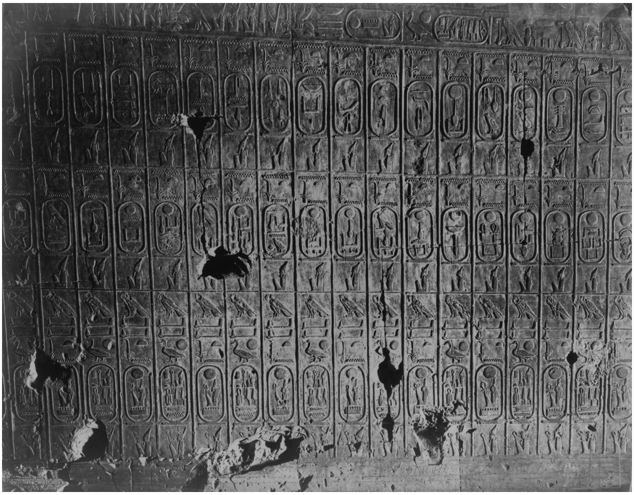


Figure 2.5 Sety I’s king list from his Abydos temple.

Source: © Griffith Institute, University of Oxford.

Shorter king lists are known in other royal inscriptions, ritual papyri from temples, and some private tomb chapels. Analyses of the king lists along with dated monuments and documents have helped Egyptologists devise chronologies in years BC, but no exact dates before the 26th Dynasty are agreed on by all scholars, hence the variations in published chronologies of pharaonic Egypt. During the Middle and New Kingdoms there were some co-regencies during which a young king ruled for several years with his father, and this practice creates problems for assessing the number of years a king ruled alone. There are also many inherent problems in lists of kings for the intermediate periods as well as discrepancies between the different king lists, compounded by a few kings known from archaeological evidence not being listed at all. In the Late Period and Greco-Roman times Egyptian chronology becomes more accurate, since historical information and/or king lists from kingdoms and empires in Assyria, Babylonia, Achaemenid Persia, Greece, and Rome can be synchronized with Egyptian ones.

Some Egyptian texts also contain information that can be synchronized with astronomical events of known dates, such as the heliacal rising of Sirius, which were mentioned in the Middle and New Kingdoms on documents dated to the year, season, month, and day of a king's reign. Because the Egyptian civil calendar of 365 days moved one day through the solar year every four years (the so-called "wandering year"), the heliacal rising of Sirius coincided precisely with the beginning of the solar new year once every 1,456 years. This event was recorded as happening in AD 139 during the reign of the Roman emperor Antoninus Pius, and it is possible to work back from that date. In this way, specific datings of astronomical events can be used to calculate exact years BC of the reigns of kings known from king lists. It is uncertain, however, where these astronomical observations were made in Egypt, and year dates vary depending on whether the observation was made in southern or northern Egypt.

Further general corroboration of dates BC is also provided by calibrated radiocarbon dates obtained from organic samples (preferably charcoal) from archaeological sites in Egypt (see Box 4-B). But more exact dating to specific years of a king's reign can only be obtained through textual evidence when that is available.

Chapter 3

The Environmental Background to Pharaonic Civilization

Geography, Environment, Agriculture, and Natural Resources

Contents

3.1 Geography: Terms and Place Names
3.2 Environmental Setting
3.3 Environmental and Other Problems for Archaeology in Egypt
3.4 The Seasons and the Agricultural System
3.5 The Ancient Egyptian Diet
3.6 Other Useful Animals and Plants
3.7 Building Materials
3.8 Other Resources: Clays, Stones, Minerals
3.9 Imported Materials

Introduction

Pharaonic Egypt arose in the lower Nile Valley, which was a kind of oasis environment between the Eastern and Western Deserts. With adequate Nile floods, Egypt's agricultural potential was enormous, providing surpluses to feed a large and expanding population. Cereal agriculture (emmer wheat and barley) was the true economic base of the state, and through taxation on agricultural surplus all full-time specialists, from priests and bureaucrats to pyramid construction crews, were paid in rations. The great agricultural wealth of ancient Egypt, controlled by the state, meant that some of the agricultural surplus could support the many craftsmen whose work is evident in tombs and tomb goods, and the supply of exotic raw materials imported into Egypt, such as frankincense and elephant ivory, which were mainly consumed by royalty and the elite.

The Nile was ancient Egypt's most important natural resource. Within the Nile Valley and Delta, with the adjacent low deserts, all of the basic resources that sustained human life were available – water, food, and the raw materials for tools, clothing, and shelter.

3.1 Geography: Terms and Place Names

Ancient Egypt was the land of the lower Nile Valley, from the First Cataract at Aswan in southern Egypt to the Mediterranean shore of the northern Delta. Because the Nile River flows from south to north, southern Egypt is called Upper Egypt, while northern Egypt (the Cairo region and the Delta) is Lower Egypt. In modern times the northern part of Upper Egypt, from Asyut to the Faiyum, is often referred to as Middle Egypt. The Egyptian Nile Valley consists of a continuous stretch of river and floodplain through Upper and Middle Egypt and the Cairo region. About 700 kilometers long, the Egyptian Nile Valley is unimpeded by any rapids.

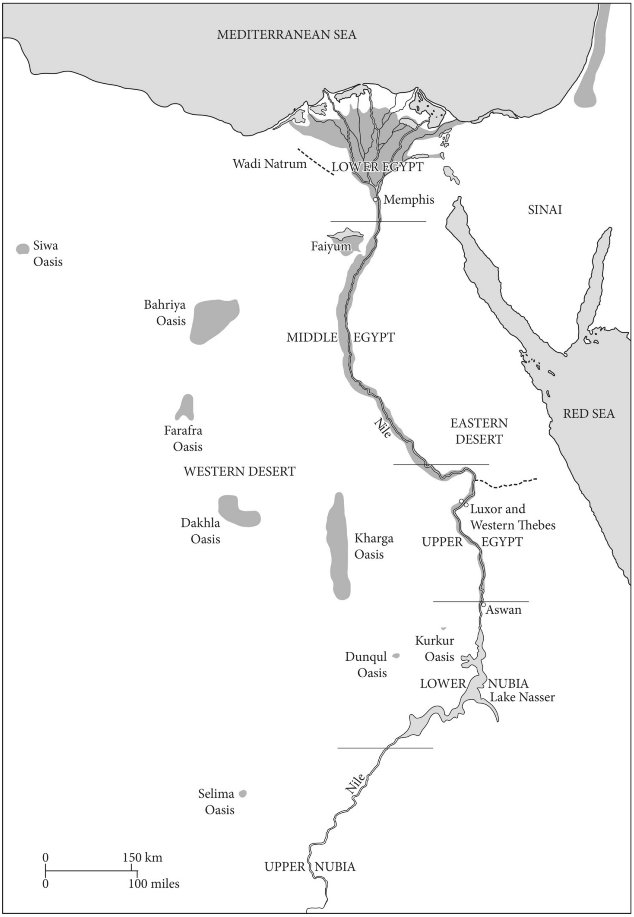
The Nile Delta, in the northernmost part of the country, is where the river breaks off into several branches, which have changed over the course of millennia as some channels silted up and others formed (seven branches were known in the 1st century AD). The two main branches of the Nile of the present Delta are the western Rosetta branch and the eastern Damietta branch.

The southern border of ancient Egypt was at Aswan, where the northernmost Nile cataract is located. Nubia is to the south of Egypt along the Nile, with Lower Nubia between the First and Second Cataracts, and Upper Nubia to the south, farther up the Nile. During much of pharaonic times Egypt controlled parts of Nubia, but the region was culturally and geographically distinct from Egypt. Lower Nubia is now covered by Lake Nasser, which flooded the region after the Aswan High Dam was built in the 1960s. As a result, thousands of archaeological sites in Lower

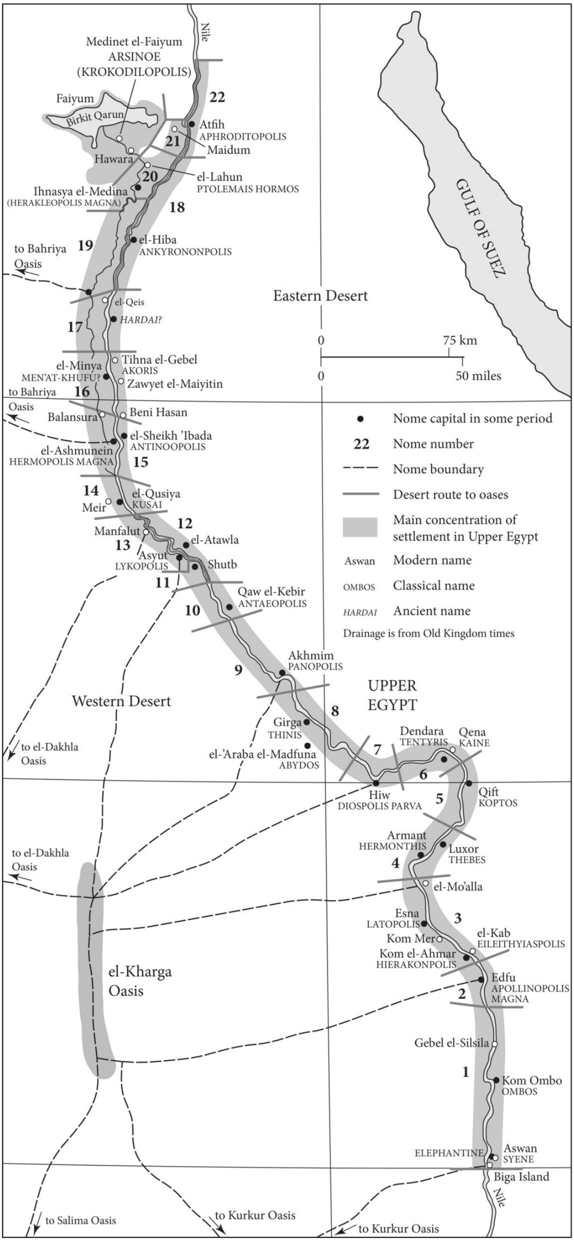
Nubia were destroyed, and tens of thousands of Nubians had to be relocated to new settlements in Egypt and Sudan.

From the beginning of the Dynastic period the capital of Egypt was at Memphis in Lower Egypt, to the west of which was Saqqara, where many kings of the Old Kingdom built their pyramids. The Theban area in Upper Egypt (modern Luxor) became important from the First Intermediate Period onward. Thebes was the power base of the kings who founded both the Middle and New Kingdoms, and the major cult center of the god Amen-Ra was located there. From the New Kingdom onward many cities were located in the Delta, which became highly populated. Middle Egypt remained a provincial region, except when the heretical king Akhenaten of the 18th Dynasty built his new capital city at the site of Amarna. To the west of the river in the northern part of Middle Egypt is the Faiyum region, with a large lake (Greco-Roman Lake Moeris, known as Birkat Qarun in Arabic) which is connected to the Nile via the Bahr Yusef branch of the Nile. The Faiyum is where there is evidence of the earliest farming in Egypt, in the late sixth millennium BC.

Ancient Egypt was divided into administrative districts or provinces (which the Greeks called nomes). Along the Nile Valley the provinces were divided in sequence with land on both sides of the river. These were the 22 provinces of Upper Egypt, which were established by the 5th Dynasty. The 20 provinces of Lower Egypt in the Delta were numbered separately, but were not finally fixed until much later, in Greco-Roman times.

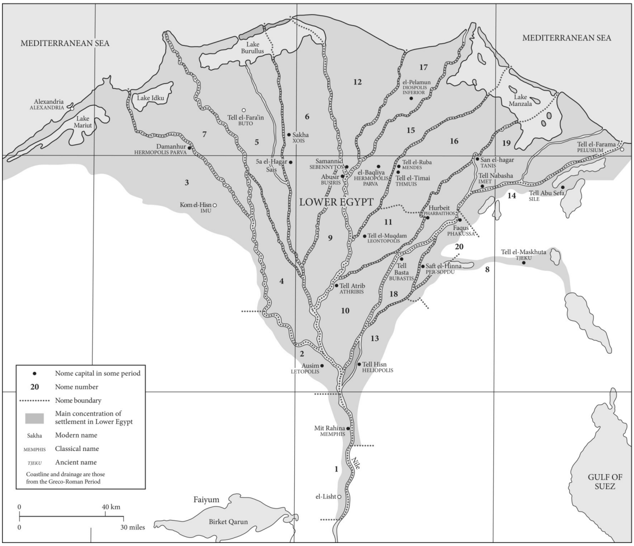

MEDITERRANEAN SEA
Wadi Natrum
LOWER EGYPT
Memphis
SINAI
Siwa Oasis
Faiyum
Bahriya Oasis
MIDDLE EGYPT
Farafra Oasis
Nile
EASTERN DESERT
RED SEA
WESTERN DESERT
Luxor and Western Thebes
Dakhla Oasis
Kharga Oasis
UPPER EGYPT
Aswan
Kurkur Oasis
Dunqul Oasis
LOWER NUBIA
Lake Nasser
Nile
Selima Oasis
0
150 km
0
100 miles
UPPER NUBIA

Map 3.1 Egypt, Nubia, Sinai, and oases in the Western Desert.


Nile
Medinet el-Faiyum
ARSINOE
(KROKODILOPOLIS)
Faiyum
Birkit Qarun
22
Atfih
APHRODITOPOLIS
21
Maidum
Hawara
20
el-Lahun
PTOLEMAIS HORMOS
Ihnasya el-Medina
(HERAKLEOPOLIS MAGNA)
18
el-Hiba
ANKYRONONPOLIS
to Bahriya Oasis
19
el-Qeis
HARDAI?
17
Tihna el-Gebel
AKORIS
el-Minya
MEN'AT-KHUFU?
Zawyet el-Maiyitin
16
to Bahriya Oasis
Beni Hasan
Balansura
el-Sheikh 'Ibada
ANTINOOPOLIS
el-Ashmunein
HERMOPOLIS MAGNA
15
14
el-Qusiya
KUSAI
Meir
12
Manfalut
el-Atawla
13
Asyut
LYKOPOLIS
Shutb
11
Qaw el-Kebir
ANTAEOPOLIS
10
Akhmim
PANOPOLIS
9
8
Girga
THINIS
el-'Araba el-Madfuna
ABYDOS
7
Dendara
TENTYRIS
Qena
KAINE
6
Hiw
DIOSPOLIS PARVA
Qift
KOPTOS
5
Armant
HERMONTHIS
Luxor
THEBES
4
el-Mo'alla
3
Esna
LATOPOLIS
Kom Mer
el-Kab
EILEITHYIASPOLIS
Kom el-Ahmar
HIERAKONPOLIS
Edfu
APOLLINOPOLIS MAGNA
2
Gebel el-Silsila
1
Kom Ombo
OMBOS
ELEPHANTINE
Aswan
SYENE
Biga Island
Nile
Eastern Desert
GULF OF SUEZ
0
75 km
0
50 miles
Western Desert
UPPER EGYPT
to el-Dakhla Oasis
to el-Dakhla Oasis
el-Kharga Oasis
to Salima Oasis
to Kurkur Oasis
to Kurkur Oasis
Nome capital in some period
22 Nome number
Nome boundary
Desert route to oases
Main concentration of settlement in Upper Egypt
Aswan Modern name
OMBOS Classical name
HARDAI Ancient name
Drainage is from Old Kingdom times

Map 3.2a Nomes of Upper Egypt.

Source: J. Baines and J. Malek, *Cultural Atlas of Ancient Egypt*. Oxford: Andromeda, 2000.



Map 3.2b Nomes of Lower Egypt.

Source J. Baines and J. Malek, *Cultural Atlas of Ancient Egypt.* Oxford: Andromeda, 2000.

The deserts to the east and west of the Nile Valley are called the Eastern and Western Deserts. In the Western Desert there is a series of major oases (Siwa, Bahriya, Farafra, Dakhla, and Kharga Oases) which are fed by underground springs. Three smaller oases (Dunqul, Kurkur, and Selima Oases) are located to the west of Nubia. Aside from these oases, the Western Desert was barren and very dry during pharaonic times, with limited habitation only in the oases.

A range of mountains up to 2,000 meters above sea level, sometimes called the Red Sea Hills, runs along the Eastern Desert from north to south. This desert too was very dry during pharaonic times. The Eastern Desert was where many desirable stones and minerals, including gold, were found, and mining and quarrying expeditions were sent there by the state. Bisecting the Eastern Desert are a number of wadis (seasonal runoff channels and desert valleys), some with a fair amount of fresh water below the surface. Some of the Eastern Desert wadis, especially the Wadi Hammamat, were the routes the ancient Egyptians took from the Nile Valley to the Red Sea coast. Lacking much fresh water, the Red Sea coast was also a hostile region for the ancient Egyptians, but harbors are known there beginning in the Old Kingdom.

On the other side of the Red Sea is the Sinai Peninsula, which is part of the modern state of Egypt but not of the ancient one. Turquoise and copper were mined there by the Egyptians, but the Sinai also had indigenous nomads who were a threat to Egyptian operations there.

Names of ancient Egyptian towns and cities can be given in three different forms: (1) transliterated and vocalized from ancient Egyptian, (2) in Greek, and (3) in Arabic. For example, "Hierakonpolis" is the Greek name of a pharaonic town in southern Egypt known as "Nekhen." The Arabic name of the town site is "Kom el-Ahmar." The most frequently used names for sites are used in this book.

3.2 Environmental Setting

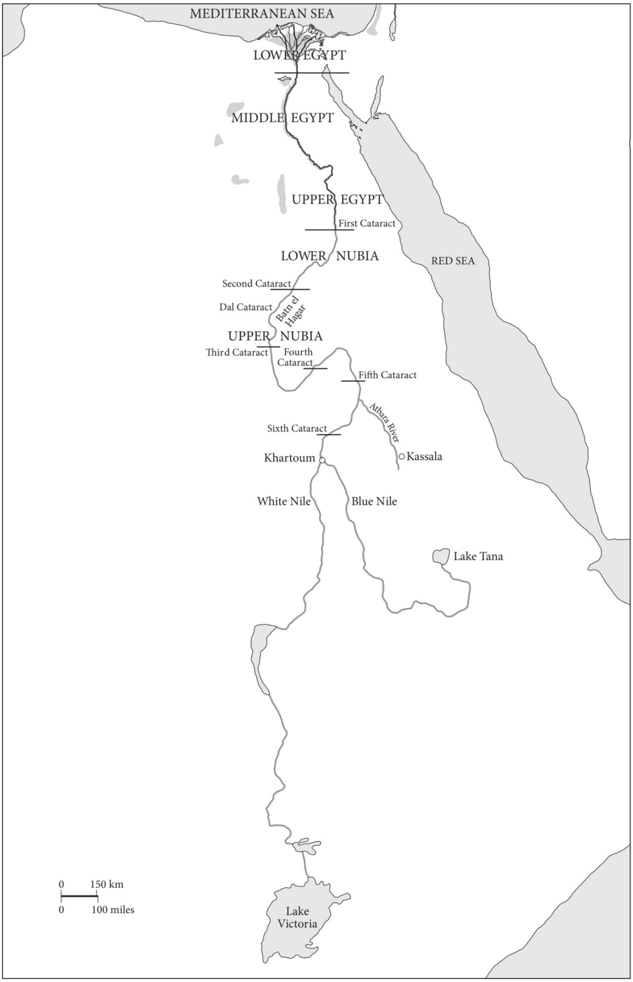
The most important natural resource in Egypt, in ancient times as well as modern, is the Nile River. Reflecting the importance of the Nile, the Egyptians from the Middle Kingdom on called their land *Kemet*, which means the "Black Land" of the floodplain where they cultivated their crops, in contrast to the deserts to either side, which were known as *Deshret*, the "Red Land" where any kind of cultivation was impossible.

Without the Nile, there would have been no fertile valley in which ancient Egyptian civilization could have arisen. Cereal agriculture, which was introduced into Egypt from southwest Asia (see 4.8), was the economic base of pharaonic Egypt. The special environmental and climatic conditions of the Egyptian Nile Valley greatly enhanced the productivity of emmer wheat and barley cultivation without the long-term problems (especially salinization) that threatened agriculture elsewhere in the ancient Near East. Cereal agriculture thrived in Egypt as nowhere else in the ancient world. What the farmers grew fed everyone else – not only the king and elite, but also all of the full-time workers employed by the state, from bureaucrats to laborers who built the royal tombs and cult temples.

Unlike agriculture in North America and Europe, rainfall is not a significant factor for cultivation in Egypt. The annual flooding of the Nile provided the needed moisture for cultivation on the fertile floodplain. Most of the water of the Nile originates far to the south of Egypt in highland Ethiopia, beginning as heavy rains there from June to sometime in September. Daniel Eugene Stanley, a geologist at the Smithsonian Institution who has analyzed deposits of silts at the mouth of the Nile Delta, has shown that most of these silts came from Ethiopia, carried via the Blue Nile, which originates at Lake Tana in northern Ethiopia. The Atbara River, which feeds into the Nile at Atbara in northern Sudan, also begins in highland Ethiopia, but the Blue Nile has a far greater volume of water. Flowing rapidly through high altitude, mountainous regions in northern Ethiopia, the Blue Nile and Atbara River have created deep canyons and much of their water passes directly into the Nile.

The White Nile, which originates in Lake Victoria in northern Tanzania, also provides some of the water of the Egyptian Nile (about 10 percent). But some of the volume of the White Nile does not reach Egypt. It is lost in a huge swampy region in southern Sudan known as the Sudd, where the flow of the river is sluggish and much evaporation occurs.

The confluence of the Blue and White Niles is at Khartoum, the modern capital of Sudan in the northern part of the country. From Khartoum northward the river is called the Nile. North of Khartoum there is little seasonal rainfall, although the northern extent of the rainfall belt, which first brings rains to northern Ethiopia, can change periodically.


MEDITERRANEAN SEA
LOWER EGYPT
MIDDLE EGYPT
UPPER EGYPT
First Cataract
LOWER NUBIA
RED SEA
Second Cataract
Dal Cataract
Batn el Hagar
UPPER NUBIA
Third Cataract
Fourth Cataract
Fifth Cataract
Atbara River
Sixth Cataract
Khartoum
Kassala
White Nile
Blue Nile
Lake Tana
0 150 km
0 100 miles
Lake Victoria

Map 3.3 Northeast Africa.

Between Khartoum and Aswan in southern Egypt there are six (numbered) cataracts, bands of igneous and metamorphic rocks which intersect with the river, creating shallows and rapids that impede boat traffic. This region of the Nile is known as Nubia, corresponding to where some Nubian languages were spoken from late antiquity onward. Above (south of) the Second Cataract there is a stretch about 160 kilometers long called the Batn el-Hagar (“Belly of Rocks”), where the rocky river bed makes navigation difficult or treacherous for much of the year except during the flood season. About midway between the Second and Third Cataracts there is also another cataract known as the Dal Cataract. Cutting through soft sandstone bedrock in Nubia, the Nile has a narrow floodplain until about 100 kilometers north of Aswan in Egypt proper. This greatly limits the agricultural productivity in most of Nubia, and the deserts on either side are some of the hottest and driest regions in the world.

The Egyptian Nile Valley, from Aswan to the apex of the Delta in northern Egypt, is a much more homogeneous stretch of the river, with no cataracts to impede navigation and communication along the river. Navigation downstream was with the current, while navigation upstream by sailboat was greatly enhanced by the prevailing northerly winds. But as John Cooper has recently demonstrated, navigating on the Nile before modern dams were built could be difficult – especially after the annual floods were finished.

Broad floodplains, up to 25 kilometers across, are characteristic of much of the Egyptian Nile Valley and are ideally suited for large-scale cereal cultivation. In cross-section the river in Egypt is a deep channel, with floodplains to either side. As Karl Butzer, a geomorphologist at the University of Texas, has emphasized, the Nile Valley is a slightly convex type of floodplain, with natural levees that rise above parts of the floodplain and often remain dry during the seasonal inundation. The levees divide the floodplain into flood basins, which are where crops were cultivated in pharaonic times. Ancient settlements were located on levees within the floodplain or at the edge of the floodplain. There were also low-lying areas beyond the floodplain, near the desert edge, which retained moisture and were good grazing places for domesticated animals.

The Egyptian Nile Valley is a very circumscribed environment, with farming possible in ancient times only on the floodplains. The present course of the river is not the same as it was during pharaonic times. For example, investigations in the Giza–Saqqara region have demonstrated that the river flowed much farther west (and closer to the pyramids) than it does today. Beyond the fertile silts and seasonally moist soils of the floodplain is the low desert, where almost nothing grows. Immediately beyond that is the high desert, consisting of limestone cliffs and hills, where tombs were excavated in the bedrock, or limestone plateaus, which provided a solid bedrock base for pyramid construction.

In the northernmost part of Egypt, the Nile Delta is a somewhat different environment from the Valley. With more river channels, the Delta is not such a highly circumscribed environment as the Valley. In the winter there are Mediterranean rains, some of which reach the Cairo region. In pharaonic times some of the Delta was used for animal grazing, including government-controlled pasturage where cattle and sheep were fattened. There was also seasonally flooded land in the Delta suitable for farming, while settlements were located on low, sandy knolls called turtlebacks that rose above the floodplain.

Since the High Dam at Aswan was built in the 1960s, the environment of the lower Nile Valley has changed. Flooding no longer occurs annually, but as needed throughout the year for perennial cultivation. The dam prevents the destruction of villages and towns in Egypt, which sometimes occurred when the annual flooding was too high. Too low floods, which decrease the amount of land under cultivation and thus total agricultural yields, are also prevented by the dam. But nutrient-rich silts brought downstream are now blocked behind the dam, and huge amounts of artificial fertilizer need to be used in Egypt.

The annual flooding used to flush out salts in the soil, which increase when fields are irrigated and evaporation occurs. Without the yearly inundation there is now much more salt in the ground water. Ground water is also higher now in the lower Nile Valley, which is a major problem for ancient stone monuments. As ground water percolates up into ancient building stones, it evaporates, leaving salts in the stone, which will eventually weaken and crumble.

3.3 Environmental and Other Problems for Archaeology in Egypt

The best preserved archaeological sites from ancient Egypt are the monuments and tombs located beyond the floodplain in the very dry low desert. In Upper Egypt sandstone temples from the New Kingdom and later are much better preserved than earlier mud-brick or stone temples, which were frequently dismantled so that new structures could be built in the same sacred space. Temples built of fine limestone, especially in the Delta, were often recycled, either for construction or to make lime.

Because of their relatively good preservation and monumental proportions, stone tombs and temples were the focus of most early scholarly fieldwork in Egypt. Well-preserved human burials and mummies also fascinated early archaeologists. Philologists and historians were interested in finding new texts, and museum curators were interested in reconstructing ancient monuments and finding works of art to send back to museums in Europe and North America. The evidence from temples, tombs, and royal mortuary complexes is highly specialized, however, and much less is known about ancient Egyptian cities and villages, and settlement patterns.

Tell (also called *kom* in Egypt) is an Arabic word for a mound formed by many layers of usually continuous human habitation – with people living in the same space over millennia and buildings rebuilt through time. The mound gets built up when houses or other structures are abandoned or collapse, and artifacts (especially potsherds) and debris from long-term occupation collect in layers, which represent different time periods of site use. The *tell*s of ancient Egyptian settlements are poorly preserved, especially with the expansion and growth of Egypt's villages, which may have destroyed *tell*s or now cover them. In the New Kingdom the total population of Egypt may have reached nearly 3,000,000, while today Egypt's population is around 83,000,000. Only about 2 percent of the land of modern Egypt is inhabitable (mostly in the Nile Valley and Delta), the rest being desert. This means that modern towns and villages within or near the floodplain are often built over ancient ones, making excavation impossible. In this respect Akhenaten's capital at Tell el-Amarna is an exception in that major parts of the ancient city were built in the low desert beyond modern villages and fields. The city is also unusual in that it was abandoned not long after Akhenaten's death, and being in an area of low population density it was not reoccupied.

Box 3-A Site preservation, context,

and looting

A number of natural processes have endangered or obscured archaeological sites in Egypt. Looting has also been very destructive. But tomb looting is not only a recent phenomenon; it is ancient. Old Kingdom pyramids were probably robbed during the First Intermediate Period (see 2.8), and pyramid blocks were used for building stones in medieval Cairo. Despite current Egyptian laws, looting of antiquities continues, especially after the recent uprising that led to the downfall of ex-President Hosni Mubarak. Egyptian antiquities bring high prices on the international art market, and because of the great demand art dealers are willing to acquire antiquities illegally.

An article by Ricardo Elia in the *Wall Street Journal* of 19 June 2002 illustrates how a New York antiquities dealer, Frederick Schultz, tried to sell stolen Egyptian antiquities. Schultz had been notified by a British associate in Egypt, Jonathan Tokeley-Parry, that “boys have just returned from the hills above Minea [in Middle Egypt] . . . and we are offered a large hoard.” Two Old Kingdom reliefs were sent to Schultz, who was assured that they came from a tomb unknown to Egyptian authorities. Later a stone head of King Amenhotep III (18th Dynasty) was covered with plastic resin and painted to look like a tourist souvenir, in order to smuggle it out of Egypt. In New York, Schultz claimed that the head came from an old English collection and was therefore legal to sell.

Schultz was convicted of dealing in stolen antiquities by US District Judge Jed Rakoff. He was fined $50,000 and sentenced to 33 months in prison. But the condition of the Old Kingdom tomb which was the source of the reliefs remains unknown, and the context of where the royal head was found is lost.

Why is context so important? Tutankhamen’s tomb is the only largely unrobbed royal tomb of the New Kingdom. Its artifacts are priceless, but knowing their context is even more valuable to archaeologists. For example, why were 11 oars placed on the floor between the north wall of the burial chamber and the gold-covered shrine that housed the king's mummified body? The intentional placement of such artifacts, which was carefully recorded by Howard Carter, must have had something to do with Egyptian beliefs about the king's burial and afterlife. Such information would be lost if Tutankhamen's tomb had been robbed. The mummy would have been stripped of all of its gold jewelry and possibly destroyed in the process.

Without context, cultural information about artifacts is lost, archaeological sites are destroyed, and artifacts become nothing more than pretty objects in private and museum collections.

With expanded cultivation, especially of cash crops such as cotton and sugar cane, and modern economic activity, such as factories and quarries, many ancient sites have been destroyed. Farmers still excavate *sebbakh* – dark, nitrogen-rich deposits from ancient settlements and decayed mud-brick – which they use for fertilizer and soil conditioner. Agricultural intensification and modern industries are necessary in Egypt, but many ancient settlements have been lost as a result of these activities.

To expand cultivation, water is now pumped up to some areas of the low desert beyond the floodplain where many prehistoric sites are located. This results in destruction of settlements previously untouched by human activity. Deflation (wind erosion) has also been destructive of the stratigraphy of sites in the low desert, many of which now consist only of the heaviest artifacts – stone tools, debris from stone tool production, and potsherds.

Many prehistoric and Dynastic sites within the floodplain have been destroyed over millennia by cultivation. With meters of deposits of river alluvium (in both the Valley and Delta) over the millennia a number of settlements have either been covered or destroyed. Shifts in the course of the river over the past 5,000–6,000 years have probably removed many sites, both prehistoric and Dynastic, particularly on the east bank. While Egypt in all periods has depended on the Nile for its subsistence, the river has also created problems of preservation of ancient settlements that archaeologists must try to understand.

Recent research by geologists Katy Lutley and Judith Bunbury, who analyzed satellite images and historical maps, combined with on-ground walking surveys in the Giza region, suggests considerable migration of the Nile River over the past 5,000 years (Plate 3.2). These investigations, combined with the results of soil corings done in the Memphis area obtained by archaeologist David Jeffreys, director of the Egypt Exploration Society's Survey of Memphis, also suggest that the head of the Delta reached a more southern point in pharaonic times. Such studies have major implications for the changing locations of ancient settlements and monuments, not only in the Giza region, but probably also in other areas of the Egyptian Nile Valley. The use of satellite image analysis, along with other relevant evidence, is thus becoming increasingly important for understanding the location of archaeological sites on a regional scale and pharaonic Egypt's greatest resource – the Nile.

3.4 The Seasons and the Agricultural System

The ancient Egyptians recognized three different seasons that accorded with the flood cycle of the Nile and the agricultural system. With the heavy rains beginning in highland Ethiopia in June, the season of inundation (*Akhet*), when the Nile flooding occurred, began in late July/August in southern Egypt. The river crested several weeks later in northern Egypt. Basins were flooded with up to 1.5 meters of water. By October the southern basins were dry enough for sowing. This was an ideal climatic cycle for the cultivation of emmer wheat and barley, which germinated and grew during the cooler months of the year (known as the season of *Peret*). The cereal grains matured and could be harvested in March–April (early in the season of *Shemu*) before the hottest and driest months of the year, from May through July, when such crops would perish with no floodwater or rain.

In his book *Early Hydraulic Civilization in Egypt* (1976), Karl Butzer has given an excellent summary of the ancient Egyptian agricultural system, which is termed "basin irrigation." Although there is not much textual information about ancient irrigation, it probably consisted of directing and controlling water in the natural flood basins of the lower Nile Valley. Levees were built up, cross-cutting dykes were created, and natural channels were maintained. Extensive, large-scale irrigation canals for field cultivation, such as those used by farmers of the contemporary city-states of southern Mesopotamia, were not needed. The bucket lift, known in Arabic as the *shaduf*, which is connected by rope to a long weighted lever, was not used in Egypt before the New Kingdom. The *shaduf* cannot raise large volumes of water and was used to water small garden plots. It may also have been used to water additional areas of fields during the inundation. Irrigation with the much more effective water wheel, which is still used today in Egypt to lift water to higher elevations, was not introduced into Egypt until Greco-Roman times.

Essentially, during pharaonic times the Egyptians relied on the annual Nile flooding to water their fields. When the flooding was too low, less land could be cultivated, which could create food shortages and possibly famine. When the flooding was too high, villages could be destroyed and temples flooded. But with normal floods the potential for cereal cultivation in this environment was enormous, and this provided the economic base of the pharaonic state.

Box 3-B Egyptian agriculture as depicted in tomb scenes

Tomb scenes and related artifacts provide a wealth of information about ancient Egyptian agriculture. Perhaps the earliest scene relating to agriculture is carved on the ceremonial macehead of King Scorpion of Dynasty 0, excavated at Hierakonpolis near the remains of an early temple. The king is depicted about to dig soil with a hoe.

Numerous scenes of agricultural activities are found in private tombs of the later Old Kingdom at Saqqara, including the harvest scenes in the 5th-Dynasty tomb of Ti.

The newly cut cereal is tied in bundles and transported to a granary, where it is threshed under the hooves of donkeys and oxen, and winnowed by women. In addition to the hunting and fishing scenes in the 6th-Dynasty tomb of the vizier Mereruka, there are many scenes of activities on his estate, including wine-making.

From the 12th-Dynasty tomb of Meketra in western Thebes comes a remarkable cache of wooden models, including a cattle barn and a bakery/brewery. Middle Kingdom tombs recorded by Percy Newberry (1893) at Beni Hasan in Middle Egypt include the tomb of Amenemhat, governor of the 16th province of Upper Egypt (the Oryx Nome), with scenes of flax cultivation and linen production, as well as cereal production, from plowing and hoeing to threshing. The Beni Hasan tomb of Khnumhotep, Administrator of the Eastern Desert for King Senusert II, has similar agricultural scenes and an orchard/vineyard scene of farmers collecting grapes and figs.

Agricultural scenes abound in New Kingdom private tombs in western Thebes. In the tombs of Nakht (TT 52), the scribe of the granaries of Thutmose IV, and of Menna (TT 69), the scribe of the fields of Thutmose IV, are painted scenes of plowing, hoeing, sowing, and the various harvesting activities. A part of the ceiling of the tomb of Sennefer (TT 96), who was overseer of the gardens of Amen during the reign of Amenhotep II, is covered with a painted grape arbor.

In the cemetery of the New Kingdom workmen’s village of Deir el-Medina in western Thebes is the well-preserved tomb of Sennedjem (TT 1), who was buried with 19 other family members. Like other men who lived in this village, Sennedjem was a workman in the royal tombs in the Valley of the Kings. On the east wall of the 19th-Dynasty tomb are idealized afterlife scenes of agriculture from the Book of the Dead: Sennedjem and his wife are shown plowing and sowing, and harvesting flax by uprooting it (Plate 3.1). Above this is another scene of Sennedjem cutting off heads of grain with a sickle while his wife collects them in a basket.

To conserve moisture in soil, most cultivation was done by broadcast sowing using a simple type of plow driven by oxen to cover the seeds. Farmers also used hoes, but Butzer believes that soil preparation with plows or hoes would have been restricted to drier fields. Cow manure was used for fuel, while bird droppings collected from dovecotes may have been used as fertilizer in gardens. After harvesting cereals, domestic animals would have fed on the stubble of these crops, and their droppings would help fertilize the soil. Butzer also suggests that farmers may have alternated the planting of cereals with legumes. Fallowing may have been practiced as well, but with only one crop grown annually, fallow fields would not have been necessary in this environment.

3.5 The Ancient Egyptian Diet

Bread and beer were the main staples of the ancient Egyptian diet. They were made from the two major cereals cultivated in Dynastic Egypt, emmer wheat (*Triticum dicoccum*) and six-row barley (*Hordeum vulgare* subsp. *Hexastichum*). Tomb scenes of baking and brewing are known, as are three-dimensional models of these activities (Figure 3.1). At Giza, 4th-Dynasty bakeries have been excavated, and real bread has been preserved in some Predynastic and later burials. Bread was made from flour ground on grinding stones and mixed with water that was then kneaded and left to rise. The dough could be shaped in a flat loaf or baked in ceramic molds. Potsherds from bread molds are often found in the remains of ancient settlements.

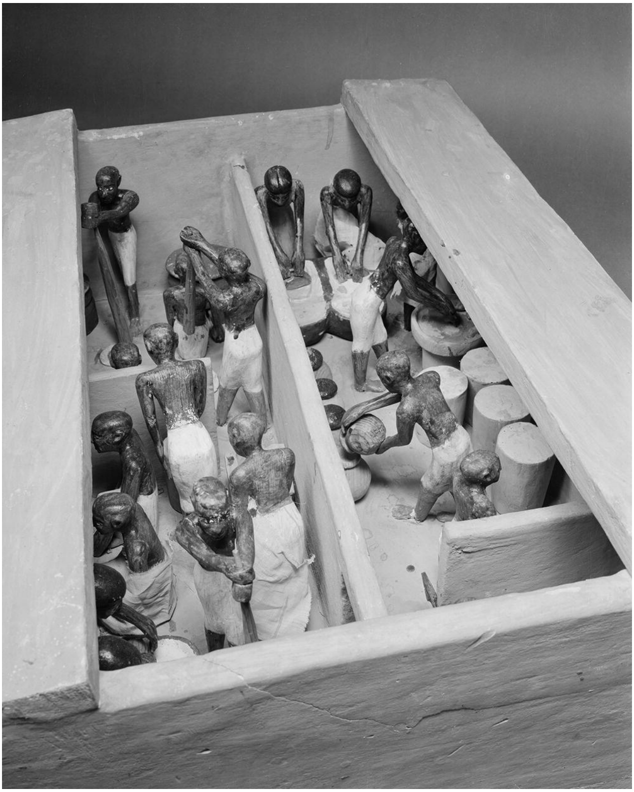


Figure 3.1 Wooden model of a bakery/brewery, from the 12th-Dynasty tomb of Meketra, Deir el-Bahri.

Source: © 2013. Image copyright The Metropolitan Museum of Art/Art Resource/Scala, Florence.

Delwen Samuel, a paleoethnobotanist at the University of Cambridge, has studied residues of ancient Egyptian beer from jars. According to her analyses, most household beer was made from barley in a two-part process. Brewing was done by sprouting (malting) one batch of barley and then mixing it in water with another batch that had been malted and heated. The mixture was then sieved and it fermented in jars. This type of beer was highly nutritious, with complex carbohydrates, sugars, and B vitamins.

Although domesticated cattle, sheep, goats, and pigs were raised in pharaonic Egypt, the major source of animal protein for most people was fish, including Nile perch, catfish, and mullets. Beef was used as offerings in temples, and would have been consumed by priests and persons of high status. Geese were domesticated, providing both meat and eggs. The chicken, which originated in southeast Asia, is not well attested in Egypt until Persian times.

Wild animals were also hunted for their meat, but as human habitation expanded in the lower Nile Valley populations of wild mammals declined or disappeared.

Wild cattle, addax, antelope, hartebeest, gazelle, ibex, Barbary sheep, and oryx were found in the desert, as were ostriches. (Other desert fauna included lions and hyenas, which were not hunted for food.) In pharaonic times many of these desert fauna were hunted for sport by royalty and nobles; hunting dogs similar to the greyhound were used for this.

Hippopotamuses were found in the Egyptian Nile in prehistoric times and may have been hunted for food (and the ivory of their canines), but they were also hunted because they could be very destructive in cultivated fields. The crocodile is another Nilotic animal that was hunted because of its danger to humans. The Nile Valley was also a major corridor for migratory fowl, some of which were hunted for food (especially species of duck and geese) using nets or throw sticks.

A number of vegetables were consumed by the ancient Egyptians, including onions, lettuce, radishes, and garlic, and types of cucumber, leek, and squash/gourd. The tubers of river plants, including papyrus, were also eaten, as were lotus seeds. Legumes such as chickpeas, peas, fava beans, and lentils provided protein as well.

Dates from the date palm were the most plentiful fruit in ancient Egypt, but only after hand pollination was practiced. It is not known when this tree first arrived in Egypt, where it was not indigenous, unlike the dom palm, which has a bifurcated trunk and produces a large brown fruit. Figs (both the common fig and sycamore fig), persea, melon, watermelon, and wild *Zizyphus* berries were also consumed. Pomegranate and carob trees became more common in the New Kingdom. Grapes were grown not only to eat but also to make wine. Large jars of wine were provided for King Tutankhamen in his tomb and there are numerous tomb scenes of wine production.

Although there is evidence of olives in ancient Egypt, olive trees do not grow well in the southern parts of the country, and olive oil was an imported luxury commodity. For sweetening, honey was produced in ceramic hives. Fenugreek was used as a spice and possibly the stems provided fodder for livestock after the seeds were removed. Coriander, cumin, and dill were available from the New Kingdom onward.

3.6 Other Useful Animals and Plants

For most of pharaonic times the donkey was the only beast of burden. Caravans and expeditions along desert routes had to rely on donkeys because the dromedary camel was not introduced into Egypt until late in the first millennium BC. Horses were not found in Egypt until after the Middle Kingdom. In the New Kingdom kings and elite warriors are depicted riding in horse-drawn chariots, which were used in warfare and for hunting.

Domesticated dogs and cats are depicted in tomb scenes as pets. Dog remains have been found at sites as early as the fifth and fourth millennia BC: they were used for hunting and later also for police work. Cats were domesticated in Egypt, possibly as early as the Old Kingdom. The cat would have been especially useful for pest control, as rats and mice were major problems anywhere that food was stored, especially cereals kept in state, temple, and private granaries.

For clothing, flax was cultivated to make linen, of which there were different qualities, depending mainly on the fineness of the weave. Fine linen was a major luxury product and export. Linen was also used to wrap mummies and to make sails for boats. Flax seeds were pressed for their oil. Egyptian cotton, which is highly desirable now because of its smoothness and strength, was not known in Egypt until Greco-Roman times.

Probably the most useful wild plant was the papyrus, which was cultivated in Greco-Roman times. Strips of its stalk were used to make small boats, mats, baskets, boxes, ropes, and sandals (see Figure 3.2). As a writing material, papyrus rolls were produced by skilled craftsmen and would have been an expensive commodity. Rushes and vegetation that grew along the river banks were also used for basketry as well as for writing pens. Halfa grass, which grows along waterways as well as on moist land, was important for boat riggings, including those which lashed the hull of Khufu's ceremonial boat, buried next to his Giza pyramid. It was also used to make baskets, mats, and ropes.

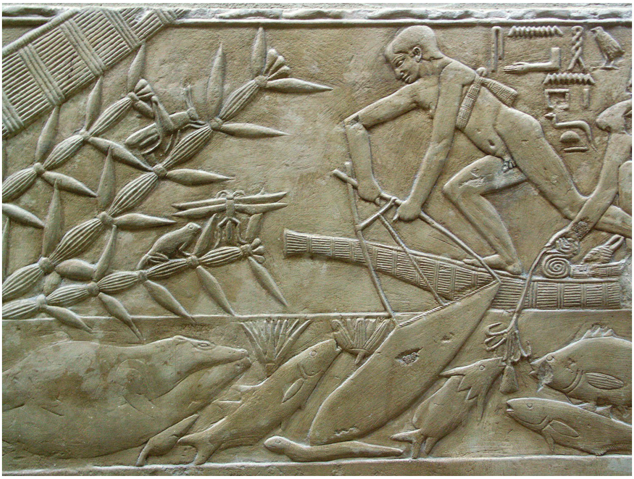


Figure 3.2 Fishing scene (from a papyrus boat), from the 6th-Dynasty tomb of Mereruka, Saqqara.

Source: MyLoupe/UIG Via Getty Images.

Although the ancient Egyptians imported cedar from the Levant to build large boats and coffins, the country was not as resource poor in wood as some have assumed. The trunks of date and dom palms could be used as ceiling rafters in mud-brick houses, with their branches covering the beams, and the hard dense wood of the dom palm was used to make domestic artifacts. Palm leaves were also used to make baskets, and palm ribs were used to make boxes (and possibly furniture). The acacia tree is another common tree which grows along the margins of the desert and in wadis where there is ground water. Acacia wood was used to make statues and furniture, and even some boats, and was also processed to make charcoal. Other local woods used in crafts include those of the persea tree, sidder (*Zizyphus spina-Christi*), sycamore fig, tamarisk, and willow.

3.7 Building Materials

Although the earliest type of shelter in prehistoric Egypt may have been made of reeds or tree branches covered with mud, during Dynastic times most people (including the king) lived in mud-brick houses. Mud and clay for construction materials were readily available on the floodplain. Mixed with chaff to make it stronger, mud was shaped in a rectangular mold and left to dry in the sun, as is still seen today in rural Egypt. Mud-brick provides excellent insulation for buildings.

Until the New Kingdom, most cult temples were also made of mud-brick with some elements in stone, but from the New Kingdom onward many temples were made of stone. Sandstone was used for temple building blocks in southern parts of Egypt where it was available, and limestone was used farther north. Limestone was also used for tomb superstructures in the north, or for blocks carved in relief on the walls of rooms in these superstructures if the buildings were made of other materials.

Other stones that were sometimes used in temple and tomb construction included granite from Aswan, and travertine (Egyptian alabaster) from quarries in Lower and Middle Egypt. The Red Chapel of Queen Hatshepsut at Karnak was built in red quartzite. Basalt was also used in construction (mainly for floors), with an important Old Kingdom quarry in the Faiyum region. Plaster and mortar for stone construction was made of gypsum (calcium sulphate), which was quarried in the Faiyum, but it also occurs naturally in many parts of Egypt.

3.8 Other Resources: Clays, Stones, Minerals

Essentially all of the basic materials needed to sustain human life were available in the Egyptian Nile Valley – to feed, house, and clothe the ancient Egyptians. When Egyptians ventured out of the Valley on expeditions, it was usually to obtain raw materials that were used to make high-status goods for elites.

From later prehistoric times onward, pottery was the most common artifact, especially for food preparation, consumption, and storage. The Nile Valley had plentiful sources of Nile silt clay for pottery. Marl clay, which is harder when fired than Nile silt wares, was mined in deposits along margins of the Valley, with an important source in the Wadi Qena, near modern Qena.

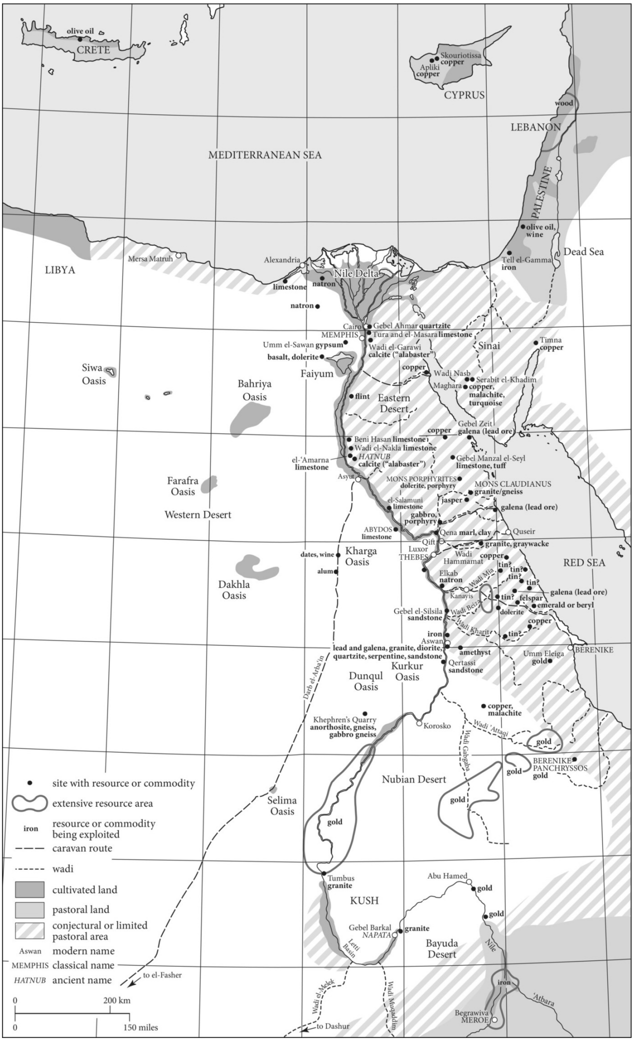
Natron (sodium carbonate and sodium chloride) was used in the mummification process to desiccate human flesh, as well as for general cleaning and in temple ritual. It was found in the western Delta and in Upper Egypt near Elkab, but the major source was in the Wadi Natrun, to the west of the Nile Delta.

Stones used for building construction were also used to make statues and stone vessels. Royal sarcophagi were carved from granite, but also in limestone and quartzite. Some stones used for craft goods were available in or near the Nile Valley, including travertine, and red and white breccia. Diorite and quartzite were found in or near Aswan, but the most important source of quartzite was northeast of Cairo.

The Eastern Desert was the source of many of the stones for carved statues and vessels, including marble, granite, greywacke/siltstone (also used for Predynastic palettes), and serpentine. “Imperial” porphyry, quarried by the Romans for columns, sarcophagi, basins, and statues, came from the site of Mons Porphyrites in the Eastern Desert. Some porphyry columns quarried in Roman times are still in use today in old Italian churches.

Stone beads are often found in Egyptian burials. Agate occurred as pebbles in Egypt. Carnelian, green feldspar (amazonite), and red, yellow, and green jasper came from the Eastern Desert. (Beryl, also known as emerald, was not used until Greco-Roman times.) Amethyst was mined near Aswan, as was garnet, which was also found in the Eastern Desert and Sinai. Steatite, found throughout the Eastern Desert, was used for making faïence beads and scarabs, usually glazed blue-green in color.

Stone was used for tools, both in prehistoric times and pharaonic times. Metal tools were costly and for the most part unavailable to the average farmer. Quarrying hard stones such as granite was done using harder stone mauls and levers. Craftsmen also used stone tools to produce artifacts such as stone vessels, for drilling as well as polishing. Chert, which forms a sharp edge when fractured, was used for stone tools that required a cutting edge. It occurred as nodules that were quarried in limestone in the desert.


olive oil
CRETE
Skouriotissa
copper
Apliki
copper
CYPRUS
wood
LEBANON
MEDITERRANEAN SEA
PALESTINE
olive oil, wine
Dead Sea
Tell el-Gamma
iron
LIBYA
Mersa Matruh
Alexandria
Nile Delta
limestone
natron
natron
Cairo
Gebel Ahmar quartzite
MEMPHIS
Tura and el-Masara limestone
Umm el-Sawan gypsum
Wadi el-Garawi
calcite ("alabaster")
basalt, dolerite
Sinai
Timna
copper
Siwa Oasis
Faiyum
copper
Wadi Nasb
Serabit el-Khadim
Maghara
copper, malachite, turquoise
Bahriya Oasis
flint
Eastern Desert
Gebel Zeit
copper
galena (lead ore)
Beni Hasan limestone
Wadi el-Nakla limestone
el-'Amarna
limestone
HATNUB
calcite ("alabaster")
Gebel Manzal el-Seyl
limestone, tuff
Asyut
MONS PORPHYRITES
dolerite, porphyry
MONS CLAUDIANUS
granite/gneiss
Farafra Oasis
jasper
el-Salamuni
limestone
galena (lead ore)
Western Desert
gabbro, porphyry
ABYDOS
limestone
Qena marl, clay
Quseir
Qift
granite, graywacke
dates, wine
Kharga Oasis
Luxor
THEBES
Wadi Hammamat
copper
RED SEA
alum
tin?
tin?
tin?
tin?
Elkab
natron
Wadi Mia
Dakhla Oasis
Kanayis
galena (lead ore)
tin?
felspar
emerald or beryl
Wadi Beiza
dolerite
Gebel el-Silsila
sandstone
copper
Wadi Kharit
tin?
iron
Aswan
lead and galena, granite, diorite, quartzite, serpentine, sandstone
amethyst
BERENIKE
Umm Eleiga
gold
Qertassi
sandstone
Darb el-Arba'in
Dunqul Oasis
Kurkur Oasis
copper, malachite
Khephren's Quarry
anorthosite, gneiss, gabbro gneiss
Korosko
Wadi 'Attaqi
Wadi Gabgaba
gold
BERENIKE PANCHRYSSOS
gold
gold
Nubian Desert
gold
Selima Oasis
gold
site with resource or commodity
extensive resource area
iron
resource or commodity being exploited
caravan route
wadi
cultivated land
pastoral land
conjectural or limited pastoral area
Aswan
modern name
MEMPHIS
classical name
HATNUB
ancient name
to el-Fasher
0
200 km
0
150 miles
Tumbus
granite
KUSH
Abu Hamed
gold
gold
Gebel Barkal
NAPATA
granite
Letti Basin
Bayuda Desert
Nile
iron
'Atbara
Begrawiva
MEROE
Wadi el-Melek
Wadi Muqaddim
to Dashur

Map 3.4 Major stone and mineral resources in Egypt, Nubia, Sinai, and the Eastern and Western Deserts.

Source: J. Baines and J. Malek, *Cultural Atlas of Ancient Egypt.* Oxford: Andromeda, 2000.

The Egyptian Nile Valley had no minerals. These had to be brought in from the Eastern Desert or imported from abroad. Both malachite (a copper ore) and galena (lead ore) came from mines in the Eastern Desert and were ground on stone palettes and used for eye paint. Small copper mines were also located in the Eastern Desert. Copper artifacts continued to be made until Ramessid times, when most metal artifacts were made of bronze. Pure copper is fairly soft, but many Egyptian copper artifacts that have been analyzed contain traces of arsenic that occurred in the copper ore deposits. Arsenic in copper makes it much harder, which is also the case when copper is (intentionally) alloyed with a small amount of tin to make bronze. Tin sources are known in the Eastern Desert, but pharaonic sources of tin are uncertain.

Gold was the most important mineral found in the Eastern Desert, mainly in the region of the Wadi Hammamat and southward. The huge quantities of gold artifacts in Tutankhamen's tomb, including the solid gold inner coffin which weighs over 110 kilograms, represent only a small amount of what must have been mined by the Egyptians in the deserts to the east of the Nile in the 18th Dynasty. The largest gold mines, however, were to the east of the Nile in Nubia.

Geological investigations of the mines and quarries where minerals and stones were obtained by the ancient Egyptians are an important aspect of materials research, as are the tools and technologies used to extract minerals and stones – and the organization and logistics involved in expeditions to sometimes very remote mining and quarrying sites. Specific quarries from which stones were obtained can also be identified, but this requires laboratory analysis (e.g., elemental and isotopes composition) and petrographic studies.

3.9 Imported Materials

Nubia, Egypt's closest neighbor, was the most important source of gold. Egypt sought to control Nubia in part because of its gold (known in texts as the gold of "Wawat"). In the New Kingdom, when the Egyptians built temple towns as far upstream as the Fourth Cataract, Egypt was the main supplier of gold to the other Near Eastern kingdoms.

Amid all the glitter of Tutankhamen's gold, only one dagger in his tomb has an iron blade. Hematite (the principal ore of iron ore) was found in Egypt and used for beads as early as the Predynastic Period, and iron ores exist in the Eastern and Western Deserts. The technology for large-scale iron production, however, did not develop until the late second millennium BC, and not until the mid-first millennium BC in Egypt. A major source of iron was in the far south of Nubia, between the Fifth and Sixth Nile Cataracts at the confluence of the Nile and Atbara Rivers. This was the region of ancient Meroe, an iron-producing kingdom that rivaled Egypt in Greco-Roman times.

Nubia was also the main corridor into Egypt for exotic raw materials, some of which may have been the products of transit trade from regions to the southeast. A land known as "Punt" in ancient Egyptian texts was probably in the region of Kassala in eastern Sudan and northward, where ebony and frankincense trees are still found. Italian archaeologist Rodolfo Fattovich, who excavated in the Kassala region in the 1980s and 1990s, has found archaeological evidence of storage facilities and seals used in long-distance trade with the Nile Valley in the mid-second millennium BC. Ebony wood from Punt was used in elite craft goods, such as a small child's chair in Tutankhamen's tomb, and incense was necessary for temple and mortuary rituals – and must have been consumed in huge quantities in ancient Egypt. Gums and other resins also came from the Punt region, as did elephant ivory and leopard skins, which were worn by some Egyptian priests. Exotic animals, such as baboons, monkeys, and giraffes, which were sometimes kept as royal pets in a palace zoo, also came from this region.

Obsidian, which when fractured forms a much sharper edge than chert, is found on both sides of the southern Red Sea and may have reached Egypt through Punt and Nubia. Obsidian tools have been found in Predynastic burials, and in Dynastic times obsidian was used for beads and other small artifacts, including the pupils of eye inlays in statues.

The Sinai Peninsula to the east of Egypt was also an important source of raw materials, including turquoise used in jewelry from mines in the western Sinai. Larger copper mines than in the Eastern Desert were located in the south-central Sinai at Wadi Maghara and in the vicinity of Serabit el-Khadim, and in the southern Negev Desert at Timna.

From Lebanon and Syria came large timbers, especially cedar, but also fir and pine. Large timbers could not have been imported overland or towed by ships, but would have been imported in the hulls of large sea-going vessels. Large royal boats for foreign trade as well as traffic on the Nile were made of cedar and this was the most desirable wood for coffins. But oils and resins from foreign coniferous trees were also desirable in Egypt, especially for use in mummification.

Perfumed oil from Palestine first came to Egypt in later Predynastic times as did copper from mines in the Negev Desert (especially Timna). In the 1st-Dynasty royal cemetery at Abydos, Flinders Petrie excavated a ramp leading to the tomb of King Semerkhet which was soaked about 1 meter deep with perfumed fat still pungent almost 5,000 years later. New Kingdom and later imports from southwest Asia included horses, silver, copper ingots (notably from Cyprus), oils, and various craft goods. Lapis lazuli, which was imported into Egypt already in Predynastic times, came though southwest Asia from mines in Badakhshan, in northeastern Afghanistan. This dark blue stone was used for beads and jewelry inlays, but its supply depended on many middlemen between Egypt and central Asia, and hence on the changing political relationships of these regions.

Although many of these imported raw materials were highly desired by royalty and the elite, none were basic necessities of daily life. For much of Dynastic times foreign trade was controlled by the crown, and the exotic imported materials were not distributed among the peasant majority of the population. The crown sent expeditions to mines and quarries in the Eastern Desert and, much less frequently, to Punt. Mining activity in the Sinai was also controlled by the state, as were parts of Nubia in the Old, Middle, and New Kingdoms.

Chapter 4
Egyptian Prehistory
The Paleolithic and Neolithic

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4.2 Lower Paleolithic
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Neolithic
4.7 Saharan Neolithic
4.8 Neolithic in the Nile Valley: Faiyum A and Lower Egypt
4.9 Neolithic in the Nile Valley: Middle and Upper Egypt

Introduction

Pharaonic civilization is a relatively recent phenomenon when compared to Egypt's long prehistory. Evidence of human cultures in Egypt is perhaps half a million or more years old, not only in the Nile Valley but also in the deserts to either side of the river – dating to periods when less arid climatic conditions prevailed there than today.

Most of the prehistory of Egypt is Paleolithic, meaning "Old Stone Age," when hunter-gatherers lived in temporary camps of small migratory groups. The major cultural change, the development of a Neolithic economy, did not occur in Egypt – in the Nile Valley and Delta – until after ca. 6000 BC, when domesticated species of wheat and barley, and sheep and goat were introduced into Egypt from southwest Asia. The Neolithic economy was the major cultural and technological change that made possible the pharaonic state, with an economy based on cereal agriculture.

Paleolithic

4.1 Paleolithic Cultures in Egypt

Ancient Egyptian civilization is a very recent phenomenon compared to the prehistoric cultures which preceded it for hundreds of thousands of years. For most of the prehistoric past in Egypt hunter-gatherers lived in small groups generally called bands. The oldest evidence in Egypt of the Paleolithic, which means “Old Stone Age,” is from perhaps as early as 700,000 years ago, although the dating of very early remains cannot be precise (see Box 4-B). Paleolithic groups, in Egypt and elsewhere in the Old World (Africa, Asia, and Europe), subsisted in part by hunting, but gathering edible wild plants (and sometimes mollusks) was probably more important for daily subsistence than hunting (and fishing), which depended on opportunity, technology (of the tools used), and some degree of cooperation among the hunters, at least to hunt large mammals. Farming and animal husbandry, which provide most of our food today, were not known during Paleolithic times, and Paleolithic hunter-gatherers lived in temporary camps, not permanent villages. Paleolithic peoples used stone tools, although it is likely that tools of organic materials, such as wood, bone, and animal horn, were used throughout the Paleolithic. Such tools have not been preserved in Egypt until the Late Paleolithic and later, and stone tools provide most of the archaeological evidence for the Paleolithic. Pottery was not invented until Neolithic times.

Since most of what is known about Paleolithic cultures is from the remains of stone tools, a typology of stone tools is used to describe the different cultures, from the earliest to the latest. The earliest Paleolithic cultures are called Lower Paleolithic, and are characterized by large stone tools known as handaxes (Figure 4.1).

Although smaller flake-tools were also made in the Lower Paleolithic about 250,000–200,000 years ago, flakes became the characteristic tool of the Middle Paleolithic in Egypt, ca. 250,000–50,000 years ago. Following a transitional period, Upper Paleolithic cultures are known from about 33,000 years ago onward and are characterized by long, thin stone tools known as blades. By ca. 21,000 years ago, during the Late Paleolithic, a new type of stone tool called bladelets had developed; these small blades are a type of microlith, less than 5 centimeters long. The last Paleolithic hunter-gatherers in Egypt belonged to Epipaleolithic cultures (also known as Final Paleolithic), after ca. 10,000 years ago.

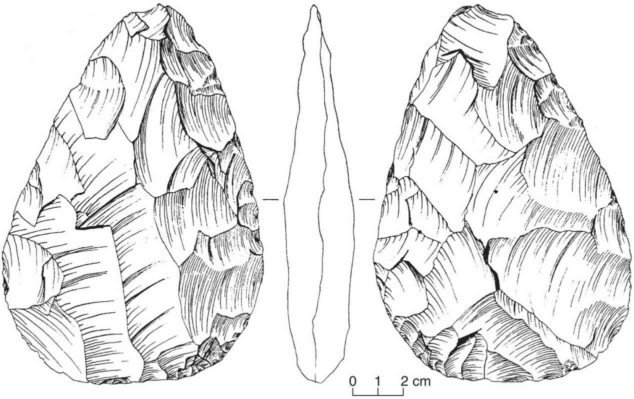
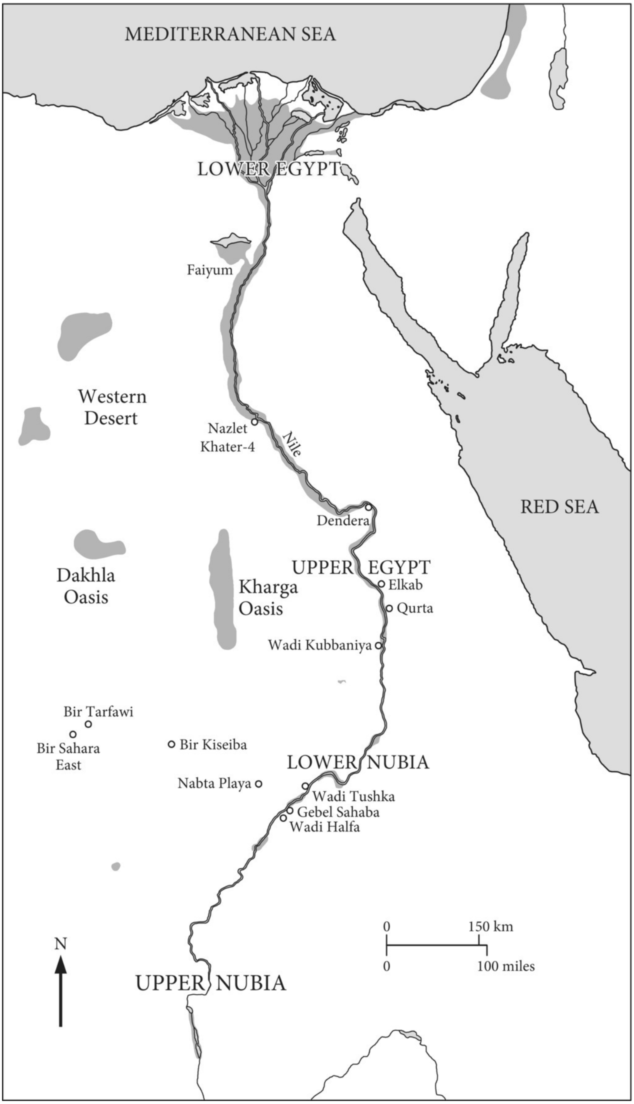


Figure 4.1 Handax.

Source: Drawing by Angela Close. Reprinted by permission.

There are many gaps in what is known about Paleolithic cultures in Egypt, especially in the sequence of archaeological evidence, as well as where the evidence has been found. One major problem is that the Nile has changed its course, volume, and pattern of alluviation, and other geological and hydrological factors have caused evidence to be buried or destroyed. In the Eastern and Western Deserts, areas outside of the oases were only occupied by hunter-gatherers where there were edible plants and animals – and water, all of which were present only during less arid climatic episodes. Because of their isolation, Paleolithic sites in the desert are often much better preserved than those in the Valley, but archaeological exploration of the deserts has also been limited. This is in part due to the very inhospitable conditions there and difficult logistics for fieldwork. Much more investigation is needed in the desert regions.


MEDITERRANEAN SEA
LOWER EGYPT
Faiyum
Western Desert
Nazlet Khater-4
Nile
Dendera
RED SEA
UPPER EGYPT
Elkab
Qurta
Dakhla Oasis
Kharga Oasis
Wadi Kubbaniya
Bir Tarfawi
Bir Sahara East
Bir Kiseiba
LOWER NUBIA
Nabta Playa
Wadi Tushka
Gebel Sahaba
Wadi Halfa
0
150 km
0
100 miles
N
UPPER NUBIA

Map 4.1 Paleolithic sites in Egypt, Nubia, and the Western Desert.

The Paleolithic stone tools that have been found in Egypt were not all produced by the same species of early man. Although there is no fossil evidence of who made Lower Paleolithic handaxes in Egypt, it is presumed that these tools are associated with *Homo erectus*, which evolved in East Africa about 1.8 million years ago. *Homo erectus* literally means "erect man," although it is now known that bipedal locomotion developed much earlier than 1.8 million years ago. *H. erectus* eventually migrated out of Africa sometime after its evolution there and populated many parts of the Old World. An important route of migration was the Nile Valley, which also provided a rich environment for the *Homo erectus* that remained there.

As a species, we (anatomically modern humans) are classified as *Homo sapiens sapiens*, which means "wise man." The Middle Paleolithic in Egypt is associated with an archaic form of *Homo sapiens* and modern humans, who evolved in Africa about 200,000–150,000 years ago. Although *Homo neanderthalensis* is known in Europe and southwest Asia, evidence of Neanderthals has not been found in Egypt or other parts of Africa. By Upper/ Late Paleolithic times *H. sapiens sapiens* was the only species of humans in Africa and elsewhere in the Old World.

4.2 Lower Paleolithic

A major problem with dating the Lower Paleolithic in Egypt is that many stone tools of this period have been found in eroded deposits along the rocky terraces to either side of the Nile Valley, or scattered across the surface of the low desert. It is difficult to date the tools without the geological contexts in which the tools were deposited, and they have to be dated according to a set of types, from early to late types established by specialists who study stone tools.

The Lower Paleolithic tools that have been found in Egypt, on the margins of the Nile Valley and in the Western Desert, are representative of a stone tool industry known elsewhere in the Old World as Acheulean, the most characteristic tool of which is the handax (Figure 4.1). Formed by chipping off flakes from a block of stone, handaxes were worked along the edge on both sides (bifacial flaking). It is not known what handaxes were used for, but possibly for cutting up animals for food and their skins for clothing. The handaxes were too large and heavy to be points for spears or arrows. They might have been multi-purpose tools, for cutting, sawing, chopping, and hammering.

Fred Wendorf, an archaeologist at Southern Methodist University (see 1.4), began excavating Paleolithic sites in the 1960s, first in Nubia and later in the Western Desert and Upper Egypt. From his extensive investigations, and research in Kharga and Dakhla Oases, it is now known that during less arid periods in Lower Paleolithic times people lived in the Western Desert next to pools of water fed by oasis springs, as well as next to seasonal ponds and lakes to the south of these oases which formed when there was some rainfall. Typologically, the handaxes at these sites are late Acheulean, possibly 500,000 years old. Earlier Acheulean tools were recorded in Lower Nubia in the 1960s, and handaxes may also be associated with ancient east–west river channels now buried under the southern part of the Western Desert. These channels were located by ground-penetrating radar images taken from a satellite, but extensive excavation is needed to demonstrate their age(s).

4.3 Middle Paleolithic

The Middle Paleolithic began in Egypt ca. 250,000–220,000 years ago. Handaxes became rare and then were no longer made, while smaller flake-tools became characteristic of this long period (up to 50,000–45,000 years ago). Flakes were made by the Levallois method, in which a core was specially prepared from a chert nodule from which flakes of a predetermined shape could then be struck (Figure 4.2).

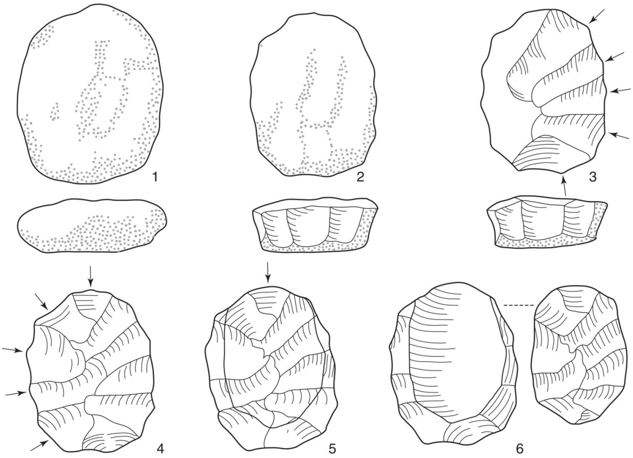


Figure 4.2 Steps in the making of a Levallois flake.

Source: François Bordes, "Mousterian Cultures in France," *Science* n.s. 134 (3482) (22 September 1961). www.anthro.utah.edu/PDFs/bordes_1.pdf.

Middle Paleolithic tools have been found in the Nile Valley, in Egypt and Nubia, but the best preserved sites are in the Western Desert. Two sites excavated by Wendorf, Bir Sahara East (about 350 kilometers west of Abu Simbel) and nearby Bir Tarfawi, had permanent lakes during wet intervals between 175,000 and 70,000 years ago. The savanna and savanna–woodland environment there supported large mammals such as rhinoceros, giant buffalos and camels, giraffes, and various antelopes and gazelles, but also small animals such as hares and wild cats. There were also fish in the lakes. The stone tools are of the (Saharan) Mousterian industry, which is the Middle Paleolithic stone tool industry known in other parts of Africa, Europe, and western Asia. In the Nile Valley, in Upper Egypt and Lower Nubia, there is evidence of Middle Paleolithic quarries and workshops, where cobbles from escarpment terraces were obtained for stone tool production.

Box 4-A Lithic analysis

Stone tools were used in Egypt from Paleolithic times through the Dynastic period, when metal tools remained costly and chert was readily available. Whereas stone tools from Dynastic sites have frequently been ignored, lithics at Paleolithic sites far outnumber any other artifacts, and are a major focus of prehistoric investigations. Tools of organic materials were certainly used in both prehistoric and Dynastic times, but stone tools have survived much better than organic ones.

Materials used for stone tools must first be identified. Petrological analysis of specially prepared thin sections of stone, examined under a microscope by a geologist, is usually necessary to identify the exact source of a rock used for tools. Chert was the most common material for making lithic tools in Egypt because it fractured with a sharp edge, but other materials such as quartz and sandstone were also used. Sources of the type of rock used for tools must also be determined. Chert could often be obtained as nodules on the desert surface, but from Middle Paleolithic times there is evidence of surface mines and even an underground one. How far the stone tools were taken away from the source (and discarded) is also useful information, which can indicate widespread movements of people, raw materials, or finished tools. In the Lower Paleolithic stone tools were usually made and discarded near where the stone was obtained, whereas in the Middle Paleolithic there is evidence of stone quarries some distance from where they were used. Obsidian tools, which have an even sharper edge than chert ones, have been found in some Predynastic (Naqada culture) burials. Obsidian came from the southern Red Sea region, which indicates long-distance trade or exchange.

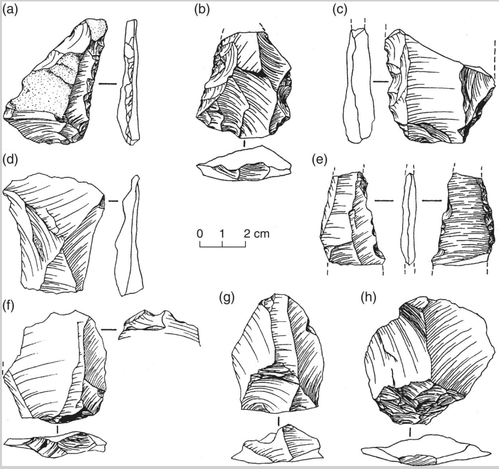


Figure 4.3 Middle Paleolithic flake tools.

Source: Drawing by Angela Close.

The context of where the stone tools were found is important. The best information about manufacturing and use of stone tools can probably be obtained when they are excavated in settlements. Sometimes there is evidence of specialized areas for lithic workshops. Information about tool use can also be obtained from hunting or fishing camps. When stone tools are found in burials they probably had a symbolic meaning. Paleolithic industrial sites include lithic workshops and quarries, whereas Dynastic sites with stone tools are industrial locations such as mines (for gold and other minerals), and quarries, where stone used for architecture and artifacts was obtained. In Predynastic and Dynastic times stone tools were used in much craft production, including the making of beads, cosmetic palettes, and stone vessels, but relevant sites are rare in Egypt.

When stone tools are excavated they are classified in a typology, as are other types of artifacts (especially potsherds), which makes it possible to compare tools from different sites. Classification of stone tools takes account of chronological, description, and functional attributes. After classification, percentages of the different tool types from a site or locality are calculated. When prehistoric stone tools have no stratigraphic context and are found on the desert surface, a broad typological classification is usually the only way to place them in a time frame.

In general, there is a reduction in the size of stone tools during the Paleolithic, from the large handaxes of the Lower Paleolithic (Figure 4.1) to the Late Paleolithic microliths that would have been hafted to use as compound tools. Tools also become more specialized, in a wide variety of types for tasks from hide preparation to points for spears and arrows. The appearance of new tool types, such as grinding stones and sickle blades, may indicate a shift in subsistence strategies, such as the increasing importance of plants in the diet. The percentages of different tool types may give an indication of the amount of hunting that was done, which is particularly useful for the analysis of Neolithic sites.

Technology of stone tool production is also important to analyze. The technology of stone tools can be as simple as cobbles, which were picked up and used as hammerstones or throw stones, but most tools were the result of a reductive technique. Flaking, to shape a stone tool, is found in all Paleolithic periods, but ground and pecked stone tools do not appear until sometime in the Middle Paleolithic. The long chert knives of the late Predynastic, with regular ripple patterns of flakes removed on one side, were made by pressure flaking, a technique that would have required a great deal of skill so that the very thin blade (as little as 3 millimeters) would not break in the process (Figure 4.4).

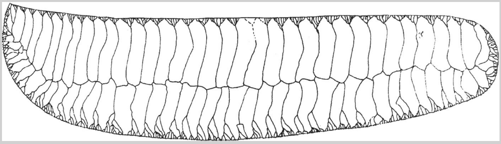


Figure 4.4 Late Predynastic ripple-flaked knife produced by pressure flaking.

Source: D. L. Holmes, *The Predynastic Lithic Industries of Upper Egypt*, Part II. Oxford: BAR International Series, 1989, p. 409.

At lithic workshops all materials are collected, not only tools, but also the cores and debris from tool production. Sometimes stone is found in intermediate stages of production, from blanks to finished tools, and materials from all stages of production can be analyzed to determine the manufacturing process. Technological investigations also include lithic experimentation, where archaeologists try to replicate the process of ancient stone tool production.

Use of stone tools for specific tasks is analyzed microscopically, by examining areas of use on stone tools. The results of experiments with replicated stone tools that have been used on known materials can also be compared to what is found on ancient tools. Edge wear analysis can distinguish how a tool was used (for example, for cutting or punching) and on what types of materials, from cutting reeds to cutting bones. Harvesting grasses usually leaves a coat of silica on the surface of a sickle blade, which can often be seen by the unaided eye, but the presence of sickle sheen cannot determine whether the harvested grasses were wild or domesticated.

After ca. 70,000 years ago the Western Desert was dry and cool, and human habitation was no longer possible except in the oases. In Upper Egypt near Qena, evidence of a late Middle Paleolithic culture dating to ca. 70,000–50,000 years ago has been identified by Pierre Vermeersch, an archaeologist at the Katholieke Universiteit Leuven (Belgium). Blades, which become the characteristic tool of the Upper Paleolithic, appear in the stone tool assemblage for the first time, suggesting a transitional phase. At the site of Taramsa-1, near the Ptolemaic temple of Hathor at Dendera, the oldest known skeleton in Egypt has been excavated. Dating to ca. 55,000 years ago, it is the burial of an anatomically modern child. Although many factors could have led to the destruction of early burials such as this one, burials are uncommon until the Neolithic and later. A burial this old is unusual in any part of the Old World, not only in Egypt. The intentional act of burial, even a simple one which did not require much energy expenditure, suggests some form of commemoration of the dead by living members of the child's family or social group that was of some social and/or symbolic significance to them.

Box 4-B Absolute dating

To date sites archaeologists often rely on radiocarbon analysis of organic samples (charcoal, wood, bones, seeds, charred food remains, etc.). Radiocarbon dating is the most frequently used method, giving the most probable range of dates for a sample in radiocarbon years bp (before present, where present is taken to be AD 1950). Radiocarbon dating can be used on samples dating from ca. 50,000/40,000 years ago, but not ones from earlier sites. Lower and Middle Paleolithic sites and climatic episodes have been dated using relative dating methods, such as thermoluminescence (TL), optical-stimulated luminescence, electron-spin resonance (ESR), amino-acid racemization, or absolute methods such as uranium series dating techniques.

Radiocarbon dating methods work by measuring the carbon 14 (a heavy carbon isotope with an unstable nucleus) content of a sample. When an organism is living it absorbs atmospheric carbon dioxide or absorbs carbon compounds (carbohydrates, proteins, and lipids) from plants or animals, which are derived from atmospheric carbon dioxide with about one part per trillion carbon 14. This process stops when that organism dies and the absorbed radiocarbon in the dead organism then begins to decay at a fixed rate. This rate is now measured by the carbon 14 half life of 5,730 years, which is the amount of time in which half of the carbon 14 nuclei decay.

Samples for radiocarbon dating from archaeological sites need to be taken and dried very carefully, so that they are not contaminated with more recent organic material. The sample needs to be removed from the ground with a metal trowel (not human fingers), and wrapped in aluminum foil or placed in a plastic bag immediately (without any preservatives). Samples should be submitted to a radiocarbon laboratory for processing relatively quickly after collection so that they do not pick up contamination in storage.

Large samples can be dated by conventional methods, first developed by W. F. Libby in the 1940s. This method measures the carbon 14 content indirectly by measuring its radioactive beta decay.

Small samples need to be dated by the more recent direct atom counting technique, developed at the University of Toronto, called Accelerator Mass Spectronomy (AMS). In this technique the carbon 14 atoms are counted directly with a special mass spectrometer. Directly counting the carbon 14 atoms in a sample is much more efficient than waiting for a very small portion of these atoms to decay and this method uses 10 to 100 times smaller sample sizes than the decay counting method. As a result, AMS dating is particularly effective for small samples or samples which produce only small amounts of datable material, such as collagen in bone samples. As AMS is not affected by cosmic radiation background, samples of some materials as old as 75,000 years can be dated.

When radiocarbon dates are obtained from samples they are in radiocarbon years bp, not in calendar years BC or AD. The radiocarbon in the atmosphere is produced by cosmic radiation interactions with the nitrogen molecules in the upper atmosphere. This cosmic radiation intensity has not been entirely constant in time, as Libby assumed. Thus, radiocarbon dates must be calibrated using radiocarbon dated tree rings of known age obtained by dendrochronologists. When calibrated, the calibrated age BC or AD (cal BC or cal AD) is given with a standard deviation in years. This calibration curve is not a straight line and sometimes two or more possible solutions exist, which, from a radiocarbon point of view, are equally probable. It is up to the archaeologist to decide which of these solutions is acceptable in an archaeological context. Since the beginning of the Industrial Revolution, carbon 14 free carbon dioxide from fossil fuel burning has diluted the carbon 14 in the atmosphere. As a result, the periods from around AD 1600 to AD 1950 will produce many possible solutions, often spanning the whole range. This often makes it difficult to interpret radiocarbon dates from this period.

An example of a radiocarbon date from the Predynastic site of Halfiah Gibli (HG) in Upper Egypt, excavated by Kathryn Bard in 1989 is:

> HG1 OxA-2182 (charcoal sample number from the site, and Oxford Radiocarbon Accelerator, Research Laboratory for Archaeology number)
>
> Radiocarbon age bp 4590 ± 80
>
> Calibrated age BC 3353

4.4 Upper Paleolithic

In southern Europe where the dating of the Upper Paleolithic (ca. 45,000–10,000 years ago) is a much longer span of time than the Upper Paleolithic in Egypt and Nubia, there is evidence of cave paintings of great beauty, as well as sculpture and jewelry. Comparable evidence – of early rock art – is now known in Egypt from Late Paleolithic times (see 4.5), which is contemporaneous with later Upper Paleolithic cultures in Europe. Blades, which are flakes that are at least twice as long as they are wide, are the characteristic stone tool of this period. The Egyptian examples are long and narrow, with greater standardization in the finished tools, which were retouched along the edges, than is evident in earlier stone tools.

The Western Desert remained uninhabitable until after ca. 10,000 years ago, creating a gap in the archaeological evidence of human cultures until after the Upper and Late Paleolithic. Upper Paleolithic sites in the Nile Valley are also rare. The oldest known underground mine in the world (ca. 35,000–30,000 years ago), a source of stone for tools, is located at the site of Nazlet Khater-4 in Middle Egypt. Also excavated at this site was the grave of a robust

Homo sapiens sapiens – with a stone ax placed next to his head.

4.5 Late Paleolithic

Many more sites are known for the Late Paleolithic, which dates from ca. 21,000–12,000 years ago, than for the Upper Paleolithic. Late Paleolithic sites are found in Lower Nubia and Upper Egypt, but not farther north, where contemporary sites are probably buried under later river alluvium. From Late Paleolithic times onward the archaeological evidence points to more rapid technological and cultural development than had occurred during the several hundred thousand years of the Lower and Middle Paleolithic (with major gaps of information for the Upper Paleolithic). Bladelets which appeared at this time are so small that they must have been hafted to make compound tools with sharp cutting edges or points, possibly suggesting the invention of the bow and arrow. Mortars and pestles are another new type of stone tool associated with the Late Paleolithic. According to Wendorf, the sequence of Late Paleolithic stone tool industries points to more regional variation than earlier, between Upper Egypt and Lower Nubia, and within each region, which may represent local innovation and exploitation of a wider range of resources.

Late Paleolithic sites are located in different environmental settings, which were occupied, often repeatedly, at different times of the year. Archaeological evidence also suggests greater variation in subsistence strategies than earlier, with more diversified hunting and gathering practices. Large mammals such as wild cattle and hartebeest (as well as the small dorcas gazelle) were still hunted, but waterfowl, shellfish, and fish (including tilapia and catfish) were also consumed.

At Wadi Kubbaniya near Aswan, Wendorf has excavated Late Paleolithic sites dating to ca. 21,000–17,000 years ago in which the diversity of hunting and fishing is clearly demonstrated. Behind a dune at the mouth of the wadi, a seasonal lake formed after the yearly flooding. Eventually the wadi was blocked off entirely from the Nile and fed by ground water. Catfish were harvested in large quantities, probably when they were spawning, and then smoked in pits to preserve them for future consumption. At several sites there are also the first remains of (wild) plants that had been gathered for consumption: tubers, especially nut-grass, and seeds of wetland plants. The tubers contained toxins that could only be removed by grinding, and the grinding stones found there and at other Late Paleolithic sites in the Nile Valley were probably used for this purpose. That a significant effort was made to process these plants to make them edible demonstrates the increasing importance of plants in the diet, perhaps as a seasonal supplement to animal protein.

To the north of Wadi Kubbaniya (about 34 kilometers to the south of Edfu and to the south of the village of el-Hosh), Belgian archaeologists have recently discovered a locality with Late Paleolithic rock art carved on cliffs of Nubian sandstone. More Late Paleolithic rock art, which was first discovered by Canadian archaeologists in the early 1960s, has been (re)located across the river near the village of Qurta, 15 kilometers north of Kom Ombo. The Qurta rock drawings consist of at least 179 individual images incised or hammered in outline in a naturalistic style – similar to images in Upper Paleolithic caves in southern Europe. Wild cattle predominate among the Qurta figures, but there are also other large mammals, birds, fish and a few stylized human figures (Figure 4.5). A Late Paleolithic settlement has also been discovered at the base of one of the Qurta cliffs with rock drawings. Thus, there is emerging evidence that in Egypt as well as in Europe toward the end of the Pleistocene hunter-gatherers were creating a form of "art" that was relevant to their cultures, in different locations and different media – depending on opportunities in the local environment.

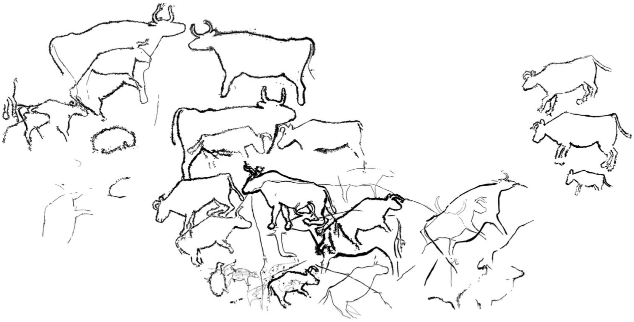


Figure 4.5 Figures of wild cattle at the Late Paleolithic rock art site of Qurta I, locality 1.

Source: D. Huyge *et al*., First Evidence of Pleistocene Rock Art in North Africa: Securing the Age of the Qurta Petroglyphs (Egypt) through OSL Dating, *Antiquity* 85 (2011): 1184–1193, Figure 2. © Royal Museums of Art and History, Brussels.

Around 13,000–12,000 years ago the last Ice Age came to an end, followed by the early Holocene, the present geological epoch in which we live. In highland Ethiopia there was increased rainfall and river discharge, and the White Nile, which had previously been dry, began to flow again. As a result of this significantly moister climate in East Africa, there were very high Nile floods in Egypt. Because of what has been termed the "Wild Nile" of this time, there are many gaps in the archaeological record. Three Late Paleolithic cemeteries in Nubia, however, date to the time of the Wild Nile, and belong to a culture with microlithic flakes, known in Lower Nubia and Upper Egypt as the Qadan industry.

The earliest known Qadan cemeteries in the Nile Valley (ca. 14,000–12,000 bp) are in Lower Nubia. At the site of Jebel Sahaba, near Wadi Halfa on the east bank of the Nile, 59 burials of men, women, and children were found. They had been buried in pits covered with sandstone slabs. About 40 percent of the burials show evidence of violent deaths, with stone points still embedded in their bones or deep cut marks on their bones.

This may be the earliest evidence of human conflict in Egypt and Nubia. As the numbers of hunter-gatherer-fishers grew in the Late Paleolithic in the Upper Nile Valley, perhaps there was increasing competition for resources, especially since there were major changes in the volume of the Nile at the time of the Jebel Sahaba burials (ca. 12,300 bp). Although there are other possible explanations (including social conflict and inter-group raiding) for the violent deaths in the Jebel Sahaba cemetery, some river locations may have been more resource rich than others, and competition between different groups may have resulted in conflict.

In another Late Paleolithic cemetery, at Wadi Tushka north of Abu Simbel in Lower Nubia, 19 burials were excavated. Several of these burials were marked with the skulls of wild cattle. Cattle horns and bucrania have also been found in some Neolithic (human) burials in Upper Nubia and northern Sudan. These later developments were not simply “cattle cults,” but reflect gradual, long-term changes in subsistence/economic practices with the increasing importance of herding, and ritual practices and beliefs found in the mainly preserved evidence of human burials, as David Wengrow has elegantly discussed. Much later in Nubia, in the late third and early second millennia BC, remains of domesticated cattle are significant in burials of the C-Group and Kerma cultures, demonstrating the continuing symbolic importance of cattle there.

4.6 Epipaleolithic (Final Paleolithic)

With warmer weather globally in the early Holocene, glaciers in the northern hemisphere began to melt and sea levels rose worldwide. In the Nile Valley many occupation sites of the last Paleolithic hunter-gatherers are probably deeply buried under alluvium. Consequently, little evidence of the Epipaleolithic has been recovered from within the Nile Valley. Only two Epipaleolithic cultures have been found, both dating to ca. 7000 BC: the Qarunian culture with sites in the Faiyum region, where a much larger lake existed than the present one, and the Elkabian, in southern Upper Egypt.

Investigations have also shown that in the Western Desert changing climatic conditions brought some seasonal rainfall ca. 9000–5000 BC, making human habitation possible in some parts of the desert which are completely dry today. Using satellite images and digital elevation models, Olaf Bubenzer and Heiko Riemer have been able to specify areas in the Western Desert which were favorable in relief for surface waters to accumulate during the early Holocene wet phase, and near seasonal sources of water such as ponds there is evidence of large camp sites of hunter-gatherers (and in some cases pastoralists; see 4.7).

At some Epipaleolithic sites in the Middle East, such as Abu Hureyra in Syria and Natufian sites in Israel, there is evidence of transitional cultures which led to the important inventions of the Neolithic (see Box 4-C). But such evidence, especially the transition from harvesting wild cereals to cultivating domesticated ones, is lacking in Egypt because the innovations of a Neolithic economy were introduced into Egypt and not invented there. While Epipaleolithic hunter-gatherers at Natufian sites (ca.

12,300–10,800 BC) were living in permanent villages occupied year round, such evidence is missing in Egypt until much later, in the Predynastic Period, and even then the evidence of permanent villages and towns is ephemeral (see 3.3).

Box 4-C Neolithic Economy

Although the term "Neolithic" means "New Stone Age," the technological and social changes that occurred during the Neolithic were some of the most fundamental ones in the evolution of human culture and society. Archaeologist V. Gordon Childe termed this development the "Neolithic revolution." The technological changes included many more tools used by farmers, which had originally developed in late Paleolithic cultures to collect and process wild plants, including sickle blades as well as axes to clear areas for farming. More importantly, the Neolithic was the period of transition from a subsistence based on hunting, gathering, and fishing, with people living in small temporary camps, to an economy based on farming and herding domesticated plants and animals, as well as the beginning of village life, which could properly be called the "Neolithic economy." Pottery, which was useful for cooking and storage of cultivated cereals, was invented in the Neolithic, although it is also associated with sedentary villages of some earlier (Mesolithic) cultures that did not practice agriculture. Village life would forever change human societies, laying the social and economic foundations for the subsequent rise of towns and cities, which Childe termed the "urban revolution."

Some of the changes the Neolithic brought were beneficial: the potential for a permanent supply of food provided by farming and herding, and permanent shelter. Hunting and gathering are physically difficult for child-bearing women, and there was a rise in population associated with the Neolithic. More women of child-bearing years survived to bear more children, and more children were useful for farming activities, especially harvesting.

But with the Neolithic came new problems – many of which have been discussed by Jared Diamond in his book, *Guns, Germs, and Steel* (1997). As agriculture and herding spread, large numbers of wild species (and their environments) were replaced by domesticated ones. With a decrease in biodiversity, there was a greater possibility of crop failure and famine, as a result of low floods (in Egypt) and droughts, as well as insect pests and diseases that prey on cultivated plants. Domesticated animals carry diseases that can be spread to humans, especially anthrax and tuberculosis. In dense human populations living in permanent villages infectious diseases also increase: smallpox, cholera, chicken pox, influenza, polio, etc. Insanitary conditions of more people living together can also create an environment that encourages parasites (bacilli and streptococci). Human waste and animals that are attracted to villages (rodents, cockroaches, etc.) can carry the bacteria of bubonic plague, leprosy, dysentery, etc. Without socially acceptable outlets, the psychological effect of more people living together in permanent settlements can also lead to increased tension and violence.

The advantages of the Neolithic economy and village life in Egypt laid the foundations for pharaonic civilization. The Egyptian Nile Valley was an almost ideal environment for cereal agriculture, with the potential of large surpluses, which were the economic base of pharaonic society. The population increased greatly during pharaonic times.

Fishing remained an important source of protein in the pharaonic diet, while fowling and hunting also continued, mainly as an elite pastime. As the habitats of wild birds and mammals decreased through time, older subsistence strategies acquired new meanings.

Working in the Faiyum, Gertrude Caton Thompson (see 1.4) identified two Neolithic cultures, which she termed Faiyum A and Faiyum B. The latter was thought to be a degenerated culture that followed Faiyum A. More recent investigations in the Faiyum in the 1960s, by Fred Wendorf and Romuald Schild (of the Combined Prehistoric Expedition), have identified Faiyum B as the Epipaleolithic Qarunian culture, ca. 1,000 years before the Neolithic Faiyum A. The Qarunian people were hunter-gatherer-fishers who lived near the shore of the lake. There is no evidence to suggest that they were experimenting with the domestication of plants and animals. They hunted large mammals such as gazelle, hartebeest, and hippopotamus, and fishing of catfish and other species provided a major source of protein. The tool kit was microlithic, with many small chert blades.

Fishing was also important for the Epipaleolithic peoples at Elkab, and they may have used (reed?) boats for deep-water fishing in the main Nile. Originally these sites were located next to a channel of the Nile. The evidence has been relatively well preserved because the sites were later accidentally protected by a huge enclosure built at Elkab in the Late Period, long after the Nile channel had silted up.

Like the Qarunian, the tools at these Elkab sites are microlithic, with many small burins (chisel-like stone tools). Grinding stones are also present. These were probably used to grind pigment, still evident on the stone, rather than to process cereals or other wild plants for consumption. Mammals, such as dorcas gazelle and barbary sheep, were also hunted. The sites were camps with no evidence of permanent occupation, and the hunters may have gone out of the Valley for seasonal hunting in the desert, which in the early Holocene had become a less arid environment.

Neolithic

4.7 Saharan Neolithic

Although there is evidence in southwest Asia of early Neolithic villages practicing some agriculture and herding of domesticated animals by ca. 9700 BC, contemporary Neolithic sites in Egypt are found only in the Western Desert, where the evidence for subsistence practices is quite different from that in southwest Asia. Occupation of the Western Desert sites was only possible during periods when there was rain. In the early Holocene there was not enough rainfall in the desert for agriculture, which in any event had not yet been invented or introduced into Egypt. Permanent villages are unknown in the earliest phase and the sites are like the seasonal camps of hunter-gatherers. While there may have been permanent settlements later, these were not villages increasing in size and population, and after about 5000 BC they were gradually abandoned, as the Western Desert became more and more arid. The Saharan Neolithic sites do not represent a true Neolithic economy (see Box 4-C). They have been classified as Neolithic because of the associated pottery and the possible domestication of cattle, which may have been herded.

Three periods of the Saharan Neolithic have been identified in the Western Desert: Early (ca. 8800–6800 BC), Middle (ca. 6500–5100 BC), and Late (ca. 5100–4700 BC). Excavated by Fred Wendorf, Neolithic sites in the Western Desert have been found in a number of localities, especially Bir Kiseiba (more than 250 kilometers west of the Nile in Lower Nubia) and Nabta Playa (ca. 90 kilometers southeast of Bir Kiseiba). Neolithic sites are also found farther north in Dakhla and Kharga Oases.

At Early Neolithic sites Wendorf has evidence of small amounts of cattle bones and argues that cattle could not have survived in the desert without human intervention, that is, herding and watering them. Whether these herded cattle were fully domesticated, or were still morphologically wild, is problematic. By ca. 7500 BC there is evidence of excavated wells, which may have provided water for people and cattle, thus making longer stays in the desert possible. But hare and gazelle were also hunted, and cattle may have been kept for milk and blood, rather than primarily for meat, as is still practiced by cattle pastoralists in East Africa.

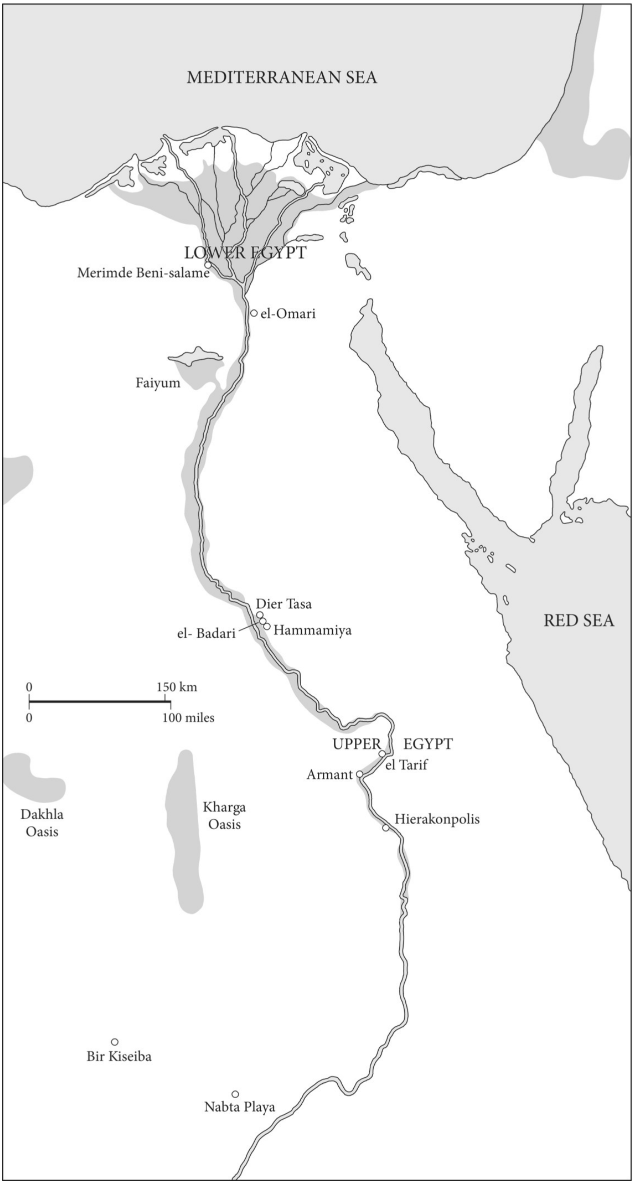
The microlithic tools of the Early Neolithic are similar to those of the Epipaleolithic Qarunian and Elkabian cultures. Stone tools include backed bladelets (with one side intentionally blunted), some of which are pointed and were probably used for hunting. Grinding stones were used to process wild grass seeds and wild sorghum, which have been preserved at one Nabta Playa site. Later evidence at the same site includes the remains of several rows of stone huts, probably associated with temporary lake levels, as well as underground storage pits and wells.

Early Neolithic pottery is decorated with patterns of lines and points, often made by impressing combs or cords. The pottery (and that of the following Middle Neolithic) is related to ceramics of the “Khartoum” or “Saharo-Sudanese” tradition farther south in northern Sudan – as well as farther west into the central Sahara. Since potsherds are few in number at Early Neolithic sites, water was probably also stored in ostrich egg shells, of which more have been found (or possibly also in animal skins that have not been preserved).

Middle and Late Neolithic occupation sites in the Western Desert are more numerous. There are more living structures and wells, as well as the earliest evidence of wattle-and-daub houses, made of plants plastered with mud. Some of these sites may have been occupied year round, while the smaller ones may still represent temporary camps of pastoralists. Sheep and goat, originally domesticated in southwest Asia, are found for the first time in the Western Desert, but hunting wild animals still provided most of the animal protein.

Bifacially worked stone tools called foliates and points (arrowheads) with concave bases become more frequent. There are also grinding stones, smaller ground stone tools (palettes and ungrooved ax-like tools called celts), and beads.

In the Late Neolithic at Nabta Playa and Bir Kiseiba a new ceramic ware appears that is smoothed on the surface; occasionally some of this pottery has rippled surfaces. There is also some black-topped pottery, which becomes a characteristic ware of the early Predynastic in the Nile Valley. The appearance of this new pottery in the Western Desert, and later in Middle and Upper Egypt (see 4.9), may be evidence for seasonal movements of people, but other forms of contact and exchange (of pottery, technology, ideas, etc.) are also possible. After ca. 5000 BC more arid conditions prevailed in the Western Desert, making life for pastoralists there increasingly difficult except in the oases, where Neolithic cultures continued into Dynastic times.


MEDITERRANEAN SEA
LOWER EGYPT
Merimde Beni-salame
el-Omari
Faiyum
Dier Tasa
el- Badari
Hammamiya
0
150 km
0
100 miles
UPPER EGYPT
el Tarif
Armant
Hierakonpolis
Dakhla Oasis
Kharga Oasis
RED SEA
Bir Kiseiba
Nabta Playa

Map 4.2 Neolithic sites in Egypt.

Some very unusual Late Neolithic evidence has been excavated by Wendorf at Nabta Playa, including two tumuli covered by stone slabs, one of which had a pit containing the burial of a bull. Also found there were an alignment of ten large stones, ca. 2 meters × 3 meters, which had been brought from 1.5 kilometers or more away, and a circular arrangement of smaller stone slabs, ca. 4 meters in diameter (Figure 4.6). It has been suggested that the stone alignments had calendrical significance based on astronomical/celestial movements (as is known for more complex stone alignments, the most famous of which is Stonehenge in southern England). Such a specific explanation for the Nabta Playa stone alignments is difficult to demonstrate, but they appear to have had no utilitarian purpose. They should probably be understood as related to the belief system of these Neolithic pastoralists.

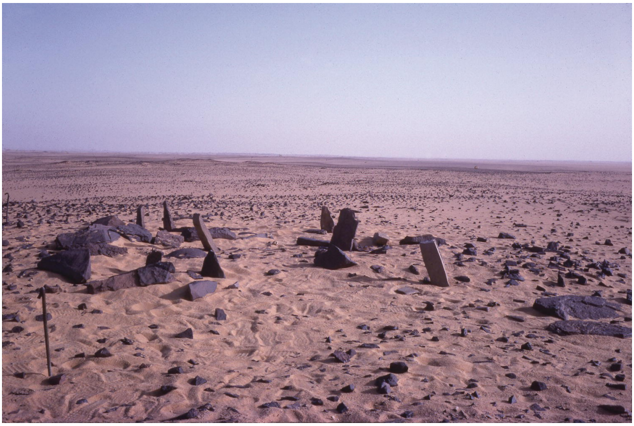


Figure 4.6 Late Neolithic stone alignment at Nabta Playa.

Source: Fred Wendorf/Copyright © The Trustees of The British Museum.

4.8 Neolithic in the Nile Valley: Faiyum A and Lower Egypt

In the Egyptian Nile Valley farming and herding were just beginning to be established in the later sixth millennium BC. Since this major cultural transition had occurred much earlier in southwest Asia, with permanent villages in existence in the Epipaleolithic, it seems strange that the Neolithic economy (see Box 4-C) appeared much later in Egypt, and of a very different type there – without permanent villages. Several explanations for the late development of the Neolithic in the Egyptian Nile Valley have been suggested:

1. None of the species of wild plants or animals that later became domesticated, with the possible exception of cattle, were present in Egypt.
2. Some of these species (six-row barley, sheep) did not appear in the southern Levant until close to 6000 BC, so they could not have appeared in Egypt until after that time. In addition, the Sinai Peninsula, which was too dry for farming, provided an effective barrier for the flow of farming technology between Egypt and the southern Levant.
3. The timing of the introduction of the Neolithic in Egypt coincides with a major climatic change to more arid conditions in the southern Levant and the end of the Pre-pottery Neolithic B (PPNB) there – when some of these early farmers may have migrated to Egypt.
4. The Nile Valley was such a resource-rich environment for hunter-gatherer-fishers that the need to supplement this subsistence with farming and herding did not develop until much later than in southwest Asia.
5. Much archaeological information from the Epipaleolithic, when technological developments were taking place which led to the invention of agriculture and herding of domesticated animals in some parts of the Old World, is missing for geological reasons in the Egyptian Nile Valley – especially if such settlements were located next to the river.

Although none of these is a satisfactory explanation by itself, in combination they help to clarify some of the problems surrounding the lack of evidence for the transition to a Neolithic economy in Egypt.

In the Faiyum region there is a gap of about a thousand years between the Epipaleolithic Qarunian culture and the Faiyum A Neolithic sites first excavated by Caton Thompson. These sites are the earliest known Neolithic ones in (or near) the Nile Valley, dating to ca. 5500–4500 BC. The sites contain evidence of domesticated cereals (emmer wheat and six-row barley) and domesticated sheep/goat, all of which were first domesticated in different parts of southwest Asia. Cattle bones were also found, only some of which are domesticated.

Recent work in the Faiyum by Willeke Wendrich has uncovered evidence of clay floors and a few postholes, which suggests huts that were present and used for short spans of time. But there is no evidence of permanent villages, and many of the Faiyum A sites resemble camps of hunter-gatherers with scatters of lithics and potsherds. The only permanent features are a great number of hearths and granaries – ca. 350 hearths at the site of Kom W, and 56 granaries (some lined with baskets) at nearby Kom K. Another 109 granaries were excavated near Kom W, one of which contained a wooden sickle (for harvesting cereals) with chert blades still hafted to it.

Although the domesticated cereals and sheep/goat at the Faiyum A sites were not indigenous to Egypt, the stone tools there argue for an Egyptian origin of this culture. Lithics include grinding stones for processing cereals, but also concave-base arrowheads for hunting, which are found earlier in the Western Desert. Faiyum A ceramics are simple open pots of a crude, chaff-tempered clay. But there is also evidence of woven linen cloth (made from domesticated flax), well-made baskets, and imported materials for jewelry, including seashells and beads of green feldspar (from the Eastern Desert), obtained by long-distance trade or exchange.

As elsewhere at early Neolithic sites in the ancient Near East, farming and herding in the Faiyum were in addition to hunting, gathering, and fishing, and cereals were probably stored for consumption in the drier months, when wild resources became scarce. Unlike Neolithic evidence in the Nile Valley, the Faiyum A culture did not become transformed into a society with full-time farming villages. In the fourth millennium BC when social complexity was developing in the Nile Valley, the Faiyum remained a cultural backwater. From around 4000 BC there are the remains of a few fishing/hunting camps in the Faiyum, but the region was probably deserted by farmers who took advantage of the much greater potential of floodplain agriculture in the Nile Valley.

Somewhat later Neolithic sites have been excavated in Lower Egypt, at Merimde Beni-Salame near the apex of the Delta, and at el-Omari, a suburb south of Cairo. Radiocarbon dates for Merimde range from ca. 4750 to 4250 BC. The site was excavated from 1929 to 1937 by Hermann Junker, but many of the field notes were lost in Berlin during World War II. Junker thought that the large area covered by the site (ca. 24 hectares) represented a large village/town. It has since been demonstrated that the village was never that large at any one time, but that occupation shifted horizontally through time.

Beginning in 1977, new excavations were conducted at Merimde by Josef Eiwanger, who identified five strata of occupation. In the earliest stratum (I) there was evidence of postholes for small round houses, with shallow pits and hearths, and pottery without temper. In the middle phase (stratum II) a new type of chaff-tempered ceramics appeared, which is also found at the site of el-Omari. Concave-based arrowheads were also new. In the later Merimde strata (III–V) a new and more substantial type of structure appeared that was semi-subterranean, about 1.5–3.0 meters in diameter, with mud walls (pisé) above. The later ceramics occur in a variety of shapes, many with applied, impressed, or engraved decorations, and a dark, black burnished pottery is first seen. Granaries from this phase were associated with individual houses, suggesting less communal control of stored cereals, as was probably the case at the Faiyum A sites with granaries.

Merimde represents a fully developed Neolithic economy. From the beginning there is evidence of ceramics, as well as farming and the herding of domesticated species, supplemented by hunting, gathering, and especially fishing. While Merimde subsistence practices are similar to the Faiyum A Neolithic, the Merimde remains also include the earliest house structures.

The Neolithic site at el-Omari, which was occupied ca. 4600–4400 BC, is contemporaneous with the latest phase at Merimde. El-Omari was excavated for only two weeks in 1925 and then briefly in 1943 by Fernand Debono. It is now covered by a highway. Although re-excavation of the site is impossible, more recent interpretation of the earlier evidence points to a Neolithic economy similar to that at Merimde, except that storage pits and postholes for wattle-and-daub houses are the only evidence of structures. In addition to tools that were used for farming and fishing (but very little hunting), there is evidence of stone and bone tools for craft activities, including the production of animal skins, textiles, baskets, beads, and simple stone vessels.

Although contracted burials (in a fetal position) are known at both Merimde and el-Omari, they were buried within the settlements. Burials at Merimde usually lacked grave goods; at el-Omari they frequently included only a small pot. Specific cemetery areas for these sites may not have been found (or recognized) in the earlier excavations, but the lack of symbolic behavior concerning disposal of the dead is in great contrast to the type of burial treatment and symbolism that began to develop in the Neolithic Badarian culture in Middle and Upper Egypt, and which became much more elaborate in the later Predynastic Naqada culture of Upper Egypt.

4.9 Neolithic in the Nile Valley: Middle and Upper Egypt

In Upper Egypt there is evidence of a transitional culture contemporaneous with the Faiyum A. In western Thebes scatters of lithics with some organic-tempered ceramics have been found by Polish archaeologists at the site of el-Tarif, and the associated material is called the Tarifian culture. Another Tarifian site has been excavated at Armant to the south. The chipped stone tools, which are mainly flake tools with a few microliths, seem to be intermediate in typology between Epipaleolithic and Neolithic ones. There is no evidence of food production or domesticated animals. In the New Kingdom this region of western Thebes was greatly disturbed by excavation of tombs for high-status officials, so most of the evidence of this prehistoric culture has probably been destroyed. What is known about the Tarifian culture suggests that a Neolithic economy was to be found farther north in the Faiyum at this time, and was not yet fully developed in the Nile Valley of Upper Egypt, where hunter-gatherers were making very small numbers of ceramics.

South of the Faiyum, clear evidence of a Neolithic culture is first found at sites in the el-Badari district, located on desert spurs on the east bank in Middle Egypt. Over 50 sites were excavated in the 1920s and 1930s by Guy Brunton, and more recently Badarian sites have been found farther south – as far south as Elkab and Hierakonpolis. From the el-Badari district sites Brunton identified a previously unknown type of pottery, which he thought was typologically earlier than the ceramics from Predynastic sites farther south. Made of red Nile clay, frequently with a blackened rim and thin walls in bowl and cup shapes, these vessels had a rippled surface achieved by combing and then polishing. Brunton's hypothesis was demonstrated to be correct by Gertrude Caton Thompson's stratigraphic excavations at another el-Badari district site, Hammamiya, where she found rippled Badarian potsherds in the lowest stratum, beneath strata with Predynastic wares. Later investigations of el-Badari district sites were conducted in the 1980s and 1990s by Diane Holmes (Institute of Archaeology, University College London). Holmes obtained radiocarbon dates of ca. 4500–4000 BC, also verifying the early date of the Badarian.

Near Deir Tasa, Brunton identified some artifacts as coming from an earlier culture that he called Tasian. Tasian pottery includes black-topped ware and black beakers with incised decoration, which have subsequently also been found at sites in the Eastern and Western Deserts. This evidence probably represents seasonal movements of desert peoples into the Nile Valley as the deserts were becoming more arid.

At the Badarian sites, Brunton excavated mainly storage pits and associated artifacts, the only remains of settlements, and cemeteries. At one site he found postholes of some kind of light organic structure, but evidence of permanent houses and sedentism was lacking. Possibly the sites that Brunton excavated were outlying camps, once associated with larger and more permanent villages being sited within the floodplain and now destroyed.

Badarian peoples practiced farming and animal husbandry, of cattle, sheep, and goat. They cultivated emmer wheat, six-row barley, lentils, and flax, and collected tubers. Fishing was definitely important, but hunting much less so. Bifacially worked tools include axes and sickle blades, which would have been used by farmers, but also concave-based arrowheads for hunting. The stone tools made from side-blow flakes suggest origins in the Western Desert, and the rippled pottery may have developed from the burnished Neolithic pottery known in the Western Desert.

What may be seen at the Badarian sites is some of the earliest evidence in Egypt of pronounced ceremonialism surrounding burials, which become much more elaborate in the fourth millennium BC Naqada culture. Brunton excavated about 750 Badarian burials, most of which were contracted ones in shallow oval pits. Most burials were placed on the left side, facing west with the head to the south. This later became the standard orientation of Naqada culture burials. The Badarian burials had few grave goods, but there was usually one pot in a grave. Some burials also had jewelry, made of beads of seashell, stone, bone, and ivory. A few burials contained stone cosmetic palettes or chert tools. Although burial elaboration becomes much more pronounced in the later Naqada culture, Wendy Anderson has suggested that a few Badarian burials show greater wealth than the majority – suggesting an incipient (two-tiered) form of social differentiation.

Box 4-D Prehistoric chronology (taken and partially revised from *The Oxford History of Ancient Egypt*, edited by Ian Shaw [2000])

Paleolithic, ca. 700,000–7000 bp (before present)

Lower Paleolithic, ca. 700/500,000–250,000 bp

Middle Paleolithic, ca. 250,000–50,000 bp

Upper Paleolithic, ca. 50,000–24,000 bp

Late Paleolithic, ca. 24,000–10,000 bp

Epipaleolithic, ca. 10,000–7000 bp

Saharan Neolithic, ca. 8800–4700 BC

Early Neolithic, ca. 8800–6800 BC

Middle Neolithic, ca. 6600–5100 BC

Late Neolithic, ca. 5100–4700 BC

Nile Valley Neolithic, ca. 5500–4000 BC

Lower Egypt

Faiyum A culture, ca. 5500–4500 BC

Merimde Beni-Salame, ca. 4750–4250 BC

el-Omari, ca. 4600–4400 BC

Middle Egypt

Badarian culture, ca. 4500–4000 BC

Burials such as the Badarian ones represent the material expression of important beliefs and practices in a society concerning the transition from life to death (see Box 5-B). Burial evidence may symbolize roles and social status of the dead and commemoration of this by the living, expressions of grief by the living, and possibly also concepts of an afterlife. The elaborate process of burial, which would become profoundly important in pharaonic society for 3,000 years, is much more pronounced in the Neolithic Badarian culture of Middle and Upper Egypt than in the earlier Saharan Neolithic or the Neolithic in northern Egypt.

Many Badarian and contemporaneous sites are located at the mouths of large wadis that ended in the Nile Valley. Studies by geologists David Dufton and Tom Branton suggest that pastoral nomads had seasonal settlements at the mouths of these wadis, but as the desert climate became drier occasional rainfall created wadi wash-out and vegetation no longer grew on the wadi floors. Later settlements became more and more focused on the Nile Valley and its changing geomorphological setting – so that by Early Dynastic and Old Kingdom times settlements were located on the river levees.

Chapter 5
The Rise of Complex Society and Early Civilization

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Introduction

With the introduction of farming and herding in Egypt, and successful development of a Neolithic economy in the lower Nile Valley, the economic foundation of the pharaonic state was laid. But the Neolithic did not mean that the rise of Egyptian civilization was inevitable. Communities in Upper and Lower Egypt became more dependent on farming in the fourth millennium BC, but only in the Naqada culture of Upper Egypt did social complexity follow the successful adaptation of a Neolithic economy. By the mid-fourth millennium BC Naqada culture began to spread northward through various mechanisms that are incompletely understood, and by the late fourth millennium it had replaced the Predynastic culture in northern Egypt.

Egyptian civilization had emerged by the first two dynasties (Early Dynastic Period), when the newly formed state was unified from the Delta to the First Cataract at Aswan, under one king and his administrative bureaucracy. The Early Dynastic Period was a time of consolidation of this large territorial polity, when state institutions became well established, along with the complex economic and political relationships of the kingdom.

Predynastic Egypt

5.1 The Predynastic Period: Egypt in the Fourth Millennium BC

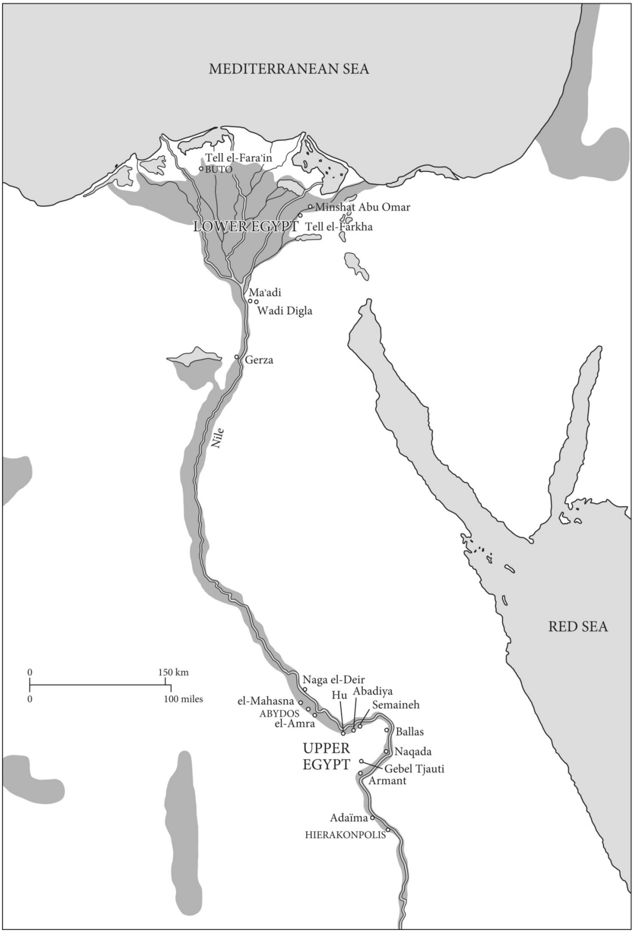
With the spread of Neolithic technology to Middle and Upper Egypt in the fifth millennium BC, the subsistence strategies of hunting and gathering were gradually supplemented and later replaced by farming and herding. Although very little archaeological evidence survives, especially in Upper Egypt, agricultural villages began to appear by the fourth millennium BC, during the Predynastic Period. The Egyptian Nile Valley was an almost ideal environment for cereal agriculture (see 3.4), and eventually some farmers would have been able to accumulate surpluses. Agricultural surpluses were probably used to feed farmers and their families throughout the year, and some seed would have been kept for planting the next crop. But surpluses beyond the necessities of subsistence could be used to obtain goods and materials not available in farmers' villages.

Although there is evidence of long-distance trade/exchange of exotic materials from before the Predynastic Period, this greatly increased in the fourth millennium BC, when craft production also increased – especially of specialized artifacts such as jewelry, carved stone palettes and vessels, and ripple-flaked chert knives (Figure 4.4), which are found in elite burials of the Naqada culture in Upper Egypt. Craft specialization included (copper) metallurgy, in both southern and northern Egypt. As the Predynastic society became more economically complex, especially in Upper Egypt, elites emerged to control it.

Archaeologists have defined two different Predynastic cultures, the culture of Lower Egypt (formerly called the “Buto-Ma’adi culture”), and the Naqada culture of Upper Egypt, based on the distribution of two very different ceramic traditions of the fourth millennium BC. In the north settlements are better preserved, while the southern Naqada culture is mainly known from its cemeteries, which are found in the low desert beyond the floodplain. Cultural differences went well beyond pottery types, however: the Naqada burials may symbolize increasing social rank or inequality through time as the graves became more differentiated, in size and numbers of grave goods, in contrast to Lower Egyptian burials, which are fairly simple and show less evidence of socio-cultural differentiation.

5.2 Lower Egypt: Predynastic Culture

The prehistoric site of Ma’adi is located in a suburb to the south of Cairo, while Buto is a site in the northern Delta with early remains in the lower strata. Sites of this culture are found in northern Egypt (with some local variation), from the northern Delta to the Faiyum region, and are distinctly different in their material remains from the Naqada culture of Upper Egypt (see 5.3). While the origins of the Lower Egyptian Predynastic culture are in the earlier Neolithic cultures in northern Egypt (see 4.8), there is also evidence of contact (especially trade) with southern Palestine.


MEDITERRANEAN SEA
Tell el-Fara'in
BUTO
Minshat Abu Omar
LOWER EGYPT
Tell el-Farkha
Ma'adi
Wadi Digla
Gerza
Nile
RED SEA
0
150 km
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100 miles
Naga el-Deir
Hu
Abadiya
el-Mahasna
Semaineh
ABYDOS
el-Amra
Ballas
UPPER EGYPT
Naqada
Gebel Tjauti
Armant
Adaïma
HIERAKONPOLIS

Map 5.1 Predynastic sites in Egypt.

Ma'adi was excavated by Cairo University archaeologists from 1930 to 1953, and was later re-examined by archaeologists from the University of Rome. Most recently it has been investigated by archaeologists from the German Archaeological Institute, Cairo. Calibrated radiocarbon dates range from ca. 3900 to 3500 BC. The settlement covered a large area about 1.3 kilometers long, but this area was never completely occupied at any one time. The village relied on cereal cultivation and animal husbandry, of cattle, sheep, goats, and pigs, with little evidence of hunting. Bone harpoons, indicative of fishing, were found there, as were catfish bones.

Evidence of house structures (originally made of wood and matting) at Ma’adi consists of pits in the ground, postholes, and hearths. Four large subterranean structures, thought to be similar to houses of the contemporaneous Beersheba culture in Palestine, were found in the eastern sector of the site. A large subterranean, stone-lined structure (8.5 m × 4 m in area), possibly a store house, was excavated in the western sector in the mid-1980s by Egyptian archaeologist F. A. Badawi (Figure 5.1). The floor of this structure was 2 meters below the surface. At Ma’adi pottery consists of globular jars and bowls of Nile clay wares (smooth red or black-polished), as well as some large storage jars sunken into the ground in the settlement. Imported pots from the Beersheba culture as well as locally made imitations of these are also found. The imported pots were containers for materials, such as oil, wine, and resins. Locally made stone vessels, mostly of basalt with lug handles and a ring base, have also been excavated. With relatively few bifacially worked tools, the Ma’adi stone tools are quite different from the Neolithic industry in northern Egypt. More common are large circular scrapers and some long blades, of types which were probably introduced from Palestine. But copper is also found at Ma’adi in different forms, including tools, three large ingots, and ore, which was probably used for pigment (and not for smelting and tool production as was once thought). Ma’adi provides the earliest evidence of the domesticated donkey, which would have been useful in the overland trade with southern Palestine. Analysis of the Ma’adi copper indicates a Near Eastern source, either mines at Timna or from the Wadi Arabah (in southern Jordan).

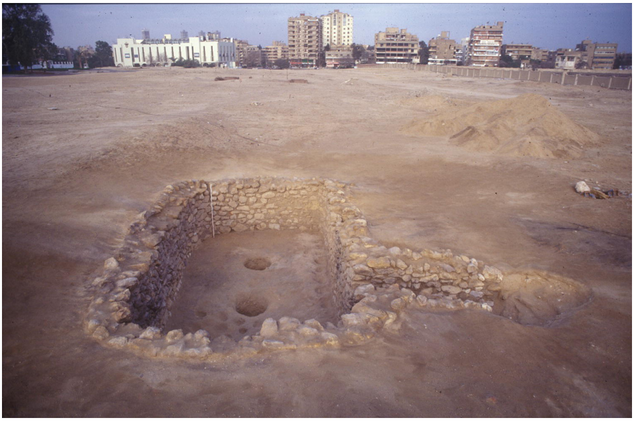


Figure 5.1 Subterranean house structure at Ma'adi.

Source: Ulrich Hartung, "The Predynastic Subterranean Dwellers in Maadi, Cairo," *Egyptian Archaeology* 22 (Spring 2003), p. 8. Reproduced with permission of German Archaeological Institute, Cairo.

Only the burials of stillborns or infants were found within the settlement at Ma'adi. Two cemeteries were excavated nearby, one about 150 meters to the south of the settlement (76 graves) and another ca. 1 kilometer away in the Wadi Digla (471 burials, 14 of which were animal burials). Half of these burials were without grave goods. Burials with grave goods usually had only one or two simple, undecorated pots; the richest burial contained eight pots. Orientation of many burials was random, but the later burials in the Wadi Digla were contracted ones, placed on the right side and oriented with the head to the south facing east, unlike those recorded at Naqada, which had the head to the south facing west.

Beginning in 1983, remains of an early settlement at Buto (modern Tell el-Fara'in, "Mound of the Pharaohs") have been excavated by the German Archaeological Institute, Cairo. Because the prehistoric levels at Buto are below the modern water table, the earliest settlement (in area A) could only be excavated with an expensive water-pumping system. Significantly, these excavations have revealed stratified evidence of the transition from the earliest layers (I–II) with local Buto ceramics of the same Lower Egyptian culture as found at Ma'adi in its last phase of occupation, to a "transitional" layer (IIIa) when Naqada culture traditions (Naqada IID phase) are found in the Buto pottery. The architecture at Buto changes from houses of wattle and daub in the earliest layers to the use of mud-brick in layer III. In layer IV, which is Early Dynastic in date, a non-domestic cultic structure appears for the first time, which becomes elaborated into a multi-room complex in layer V.

As at Ma'adi, there is ceramic evidence at Buto of contact (probably overland) with southern Palestine. According to Dina Faltings, who directed the Buto excavations in the 1990s, some of the early pottery (Buto I) is of a "foreign type" known in the Chalcolithic in Palestine, but was made at Buto with local clay and produced on some kind of turning device. This pottery disappears in phase II at Buto, as does the specialized technology which would have made mass production of pottery possible.

Occupation at Ma'adi came to an end in the later fourth millennium BC (equivalent to the Naqada IIC phase), when the site was abandoned. At Buto, the stratigraphic evidence suggests the assimilation of the Lower Egyptian Predynastic culture in layer III, and the continuation into Dynastic times of a material culture that had its roots in the Predynastic Naqada culture of Upper Egypt.

Located in the northeast Delta, Tell el-Farkha was a settlement which became increasingly important to the trade route from Upper Egypt to Palestine. Tell el-Farkha also has evidence of transitional culture – the last stage of Lower Egyptian culture along with what were probably the first settlers of the Naqada culture from the south. First excavated by an Italian expedition directed by Rodolfo Fattovich, the site has been excavated by the Polish Archaeological Expedition to the Eastern Nile Delta since 1998.

Houses of the oldest settlement of Lower Egyptian culture, beginning ca. 3700/3600 BC, have been excavated on the Central Kom at Tell el-Farkha, where many imported artifacts from the south, including beads, have also been found. In later Naqada II times a brewery was located in part of this settlement, as was another one on the Western Kom, in use for perhaps 300 years. By ca. 3300–3200 BC, however, the center of power (and trade) at the site shifted to a monumental mud-brick structure on the Western Kom, which Marek Chłodnicki suggests was probably administered by Naqadans. Built over the earlier brewery, this building consisted of rooms organized around a courtyard. Imported Palestinian pottery, storage jars and sealings provide evidence that it was used for trading activities – but it was eventually destroyed by fire. Subsequently, a large administrative/cultic center was built there with two shrines containing ritual artifacts (see 5.6).

On the Eastern Kom at Tell el-Farkha was a settlement area in which fragments of two gold-covered male statuettes (30 centimeters and 57 centimeters long) were found along with two elaborate, flaked stone knives of Naqada IID date, and a necklace of carnelian and ostrich eggshell beads. The gold figurines were originally held together by gold rivets and had inlaid eyes of lapis lazuli. The gold for these statuettes most likely came from Upper Egypt and the lapis lazuli had to have come from eastern Afghanistan. The evidence of these materials used to make cult artifacts at Tell el-Farkha demonstrates the significance of this center as a nexus with far-reaching trade connections. Later on the Eastern Kom a large monumental building of mud-brick ("Protodynastic mastaba") was built within a cemetery. Krzysztof Ciałowicz has suggested that this mastaba was for the burial of a local ruler or governor ca. 3200–3100 BC – predating the political unification of Egypt. The richest burials in this cemetery have pots with the names of kings of Dynasty 0.

5.3 Upper Egypt: Naqada Culture

The Naqada culture of Upper Egypt is named after the largest known Predynastic site, Naqada, excavated by W. M. Flinders Petrie in 1894–1895 (see 1.4). Occupation spanned most of the fourth millennium BC, from Naqada I to Naqada III times, according to the relative chronology (see Boxes 5-A and 5-C). The Naqada culture originated in Upper Egypt, with major centers at Abydos, Naqada, and Hierakonpolis. Naqada culture sites are also found in southern Middle Egypt in the el-Badari district, and in Naqada II times in the Faiyum region (Gerza). By Naqada III times, Naqada culture pottery is found in the northern Delta. Unlike the Lower Egyptian culture sites, much of the Naqada culture evidence is from cemeteries, and settlements have been poorly preserved or buried under later alluvium or villages.

Box 5-A Ceramic seriation: Flinders Petrie's Sequence Dating system

Placing ceramics (or other types of artifacts) in a relative sequence from early to late is one way in which archaeologists date sites. Radiocarbon dating helps to confirm the range of dates of the ceramics, obtaining ranges of absolute dates BC or AD (see Box 4-B), but before its invention Predynastic sites could only be given relative dates based on artifact types, which changed through time (Figure 5.2).

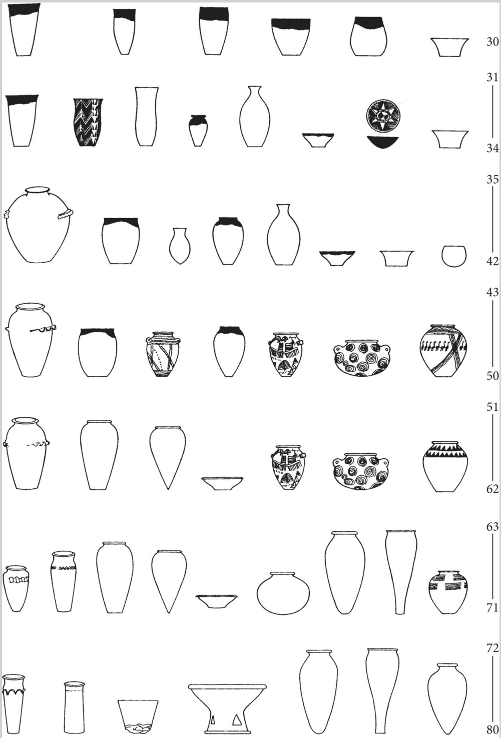


Figure 5.2 Sequence Dating chart showing Petrie's Predynastic pottery classes.

> Source: after W. M. F. Petrie, *Diospolis Parva. The Cemeteries of Abadiyeh and Hu*. London: Egypt Exploration Fund, 1901.

Relative ceramic sequences are usually based on excavated strata, with earlier ceramics in the lower levels and later ceramics in the upper levels, as was demonstrated by Gertrude Caton Thompson's excavations of Predynastic remains at Hammamiya (see 4.9). But Flinders Petrie did not have a Predynastic stratigraphic sequence to make use of in the late 19th century, when he recognized the need to give relative dates to the thousands of Predynastic (Naqada culture) burials that he had excavated at Naqada and later at Abadiya and Hu.

To date his Predynastic burials, Petrie devised a system which he called Sequence Dating (SD), published in 1901. This was an important contribution to archaeological method, and Petrie was the first to recognize the chronological value of ceramics (see 1.5). Petrie also placed other grave goods, such as stone palettes and vessels, in a relative sequence, but his dating system was based primarily on a seriation of "classes" of pottery. Petrie's classes of Predynastic pottery are not true wares, a classification of pottery not known in Petrie's time, but represent his typological divisions of the pottery from Naqada culture graves.

In a numbering system from 30 to 79 (leaving out the sequence of numbers 1–29 and 80–100 for pottery types that might be discovered later), Petrie placed the pottery in three relative phases: Amratian (SD 30–39), Gerzean (SD 40–52), and Semainean (SD 54–79), named after Predynastic cemeteries that he had excavated. The earliest Naqada ceramics (Amratian) were what Petrie called "Black-topped red" class, "Red Polished" class, and "White Cross-lined" class. In the Gerzean phase "Wavy-handled" class (with wavy handles) and "Decorated" class (with red-painted decoration) were found for the first time. A utilitarian ware called "Rough" class (tempered with straw) became more common in burials, while the black-topped and red-polished pottery decreased. In the Semainean phase, many of the ceramics were what Petrie called "Late" class; these have a direct connection to the pottery that he excavated in the royal 1st-Dynasty tombs at Abydos.

Petrie's Sequence Dating system was subsequently revised, first by Walter Federn, an Austrian émigré working at the Brooklyn Museum in 1942, who introduced the concept of fabric in the classification. Ceramic fabric refers to the type of clay/paste and temper used to make a pot (temper is added to prevent the clay from cracking when fired). Petrie's system was later refined in the 1950s by Werner Kaiser, using the ceramics excavated in the 1930s by O. H. Myers at Armant Cemetery 1400–1500, the best preserved and recorded Predynastic cemetery in Upper Egypt.

Kaiser's seriation modified Petrie's placement of ceramics into 11 stages (*Stufen*, in German) within three main phases, which he called Naqada I, II, and III. As excavation continues at Predynastic sites, this relative sequence is becoming further refined into sub-phases.

Petrie	Kaiser
Amratian = SD 30–39	Naqada I = SD 30–38
Gerzean = SD 40–52	Naqada IIA, IIB = SD 38/40–45
	Naqada IIC, IID = SD 40/45–63
Semainean = SD 54–79	Naqada III = SD 63–80

Predynastic (and later Egyptian) ceramics can also be used to establish relative sequences at sites outside of Egypt, by a technique called cross dating. When found in A-Group burials in Nubia, imported Naqada culture pots could be classified, and the A-Group burials could then be given a relative date from the Naqada culture phases. Cross dating of imported ceramics found at Dynastic Period sites in Egypt is also a very useful dating technique.

At Naqada (ancient Nubt) Petrie excavated two settlements (North Town and South Town) and three cemeteries (with over 2,200 burials). At nearby Ballas his colleague James Quibell excavated an estimated 1,000 burials. In the settlements, mud-brick architecture was found only at South Town, where Petrie recorded the remains of a thick wall, which he thought was some kind of fortification. It has also been suggested that this structure was a temple. South Town may have been much larger than what Petrie recorded, with an eastern part extending into the floodplain.

In the 1970s and early 1980s, Naqada settlements were reinvestigated by an American team led by Fekri Hassan and T. R. Hays. They recorded remains of small villages on the low desert consisting of postholes for huts of wood and matting or wicker, sometimes covered with mud clumps. Inside the huts were hearths and storage pits. Emmer wheat and barley were cultivated, and cattle, sheep/goats, and pigs were herded. There is also significant evidence of fishing, but much less for hunting. South Town was also reinvestigated in the late 1970s by Italian archaeologists, including Rodolfo Fattovich (University of Naples "l'Orientale"), who found evidence of mud sealings, possibly placed on storeroom doors to secure their contents. This suggests more specialized economic activity at South Town, the largest known settlement in the region, where goods and/or materials were collected and stored, and probably an incipient administration/bureaucracy which organized this. Cylinder and stamp seals, which were impressed on the wet clay seals, probably for identification of ownership in an exchange system, are also found in a few Naqada culture graves.

The largest cemetery at Naqada, which Petrie called the "Great New Race Cemetery," was located to the northwest of South Town. Petrie first thought the pottery in these burials represented an invading "race" in Egypt after the Old Kingdom because it was very different from the Dynastic pottery that he had excavated. He later recognized that the Naqada pottery was Predynastic, and his original name for this cemetery became irrelevant. Petrie's seriation of the Predynastic pottery (see Box 5-A) was published in 1901, in a system that he called Sequence Dating.

To the south of the Great New Race Cemetery was Cemetery B, probably associated with a small farming village, and to the south of this was Cemetery T, which has been called the burial place of Predynastic chiefs or kings because of its high status burials (Figure 5.3). All of the Naqada burials were contracted ones in round or rectangular pits in the low desert. Petrie recorded a standard orientation for about 200 of these burials, resting on the left side facing west, with the head to the south. This burial orientation is the opposite of that recorded for the Ma'adi burials, and is another type of evidence demonstrating differences between the northern and southern Predynastic cultures.

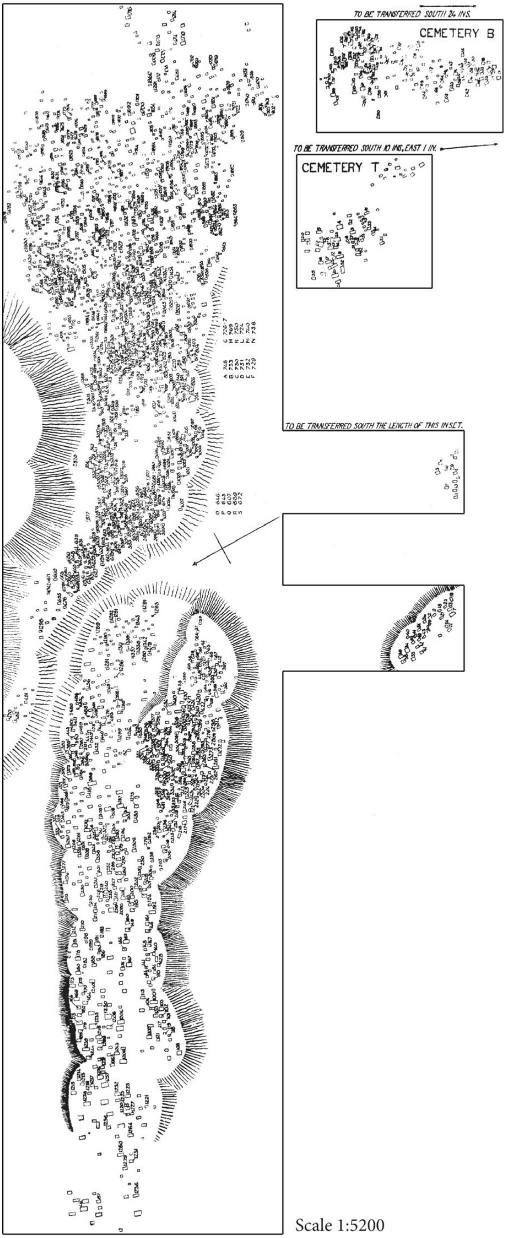

TO BE TRANSFERRED SOUTH 24 INS.
CEMETERY B
TO BE TRANSFERRED SOUTH 10 INS, EAST 1 IN.
CEMETERY T
TO BE TRANSFERRED SOUTH THE LENGTH OF THIS INSET.
A 748
B 733
C 730
D 751
E 732
F 729
G 726-7
H 769
K 750
L 724
M 740
N 738
O 646
P 643
Q 607
R 869
S 672
Scale 1:5200

Figure 5.3 Plan of the Naqada cemeteries excavated by W. M. Flinders Petrie.

Source: E. J. Baumgartel, Petrie's Naqada Excavation. A Supplement, London: B. Quaritch, 1970. Reproduced with permission of Oxbow

Books.

While the archaeological evidence at Naqada is not sufficient to demonstrate the growth of an urban center (some of which must be buried in the floodplain) which controlled a regional polity, its burials suggest increasing social complexity through time – and the ideological significance of burial. In the Great New Race Cemetery, Naqada I burials are small and contain few grave goods, whereas from Naqada II times there are a few larger burials with more grave goods (up to 85 pots). Cemetery T, which mostly dates to the Naqada II phase, was the high-status cemetery at Naqada. With 69 burials, it was a cemetery for only a small elite group, set apart in space from the other Naqada cemeteries. The Cemetery T graves were large and three had elaborate structures that were lined with mud-brick. Most of the Cemetery T graves had been disturbed by looting, but the undisturbed grave T5 contained many artifacts such as carved stone vessels and jewelry made from exotic imported materials. Although the political status of those buried in Cemetery T (kings or other political leaders?) cannot be specified, the burials there are very different from those in other Naqada cemeteries, symbolizing a special status in the Naqada society.

In Naqada III times the number of burials at Naqada decreases, and there are fewer grave goods in exotic materials. But with the decline in high-status burials, an altogether more elaborate tomb appeared. In 1897 Jacques de Morgan excavated an elaborately niched mud-brick superstructure at Naqada, which he called the “royal tomb,” along with small graves of Early Dynastic date. A second poorly preserved structure similar to the “royal tomb” was also recorded. In the royal tomb were clay sealings of King Aḥa, the first king of the 1st Dynasty, and the name of Aḥa’s mother Neith-hotep was also found on tomb artifacts. Although this was not Aḥa’s tomb (his tomb has been identified at Abydos, and his sealings in the Naqada tomb are evidence of provisioning during his reign), the Naqada royal tomb represents a truly monumental type which appeared at Naqada at the beginning of the Dynastic period.

At Hierakonpolis (ancient Nekhen) in the far south, settlement evidence is better preserved than at Naqada. Predynastic evidence there was first investigated in the late 19th and early 20th centuries by French and English archaeologists, when the well-known Decorated Tomb (Tomb 100) was excavated along with four other large rectangular tombs similar to those in Cemetery T at Naqada. With artifacts of Naqada IIC date, the Decorated Tomb is the only known Predynastic burial with scenes painted on a plastered wall within the tomb (Figure 5.4).

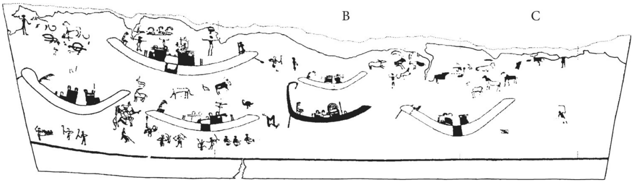


Figure 5.4 Wall scene from Tomb 100, Hierakonpolis.

Source: Ian Shaw (ed.), The Oxford History of Ancient Egypt. Oxford: Oxford University Press, 2000. pp. 52–53.

Modern investigations, including archaeological survey, began at Hierakonpolis in 1967, directed by Walter Fairservis (Vassar College), and beginning in 1978, by Michael Hoffman (see 1.5). Fieldwork has continued there under the direction of Barbara Adams (Petrie Museum of Egyptian Archaeology, University College London) and now Renée Friedman (the British Museum). Coring under the Dynastic town of Nekhen revealed earlier Predynastic remains, and evidence of other Predynastic settlements has been located, including a large desert-edge settlement with administrative(?) buildings, and workshops for stone tools, stone vessels and beads. Large-scale production areas for beer and pottery (beer jars) have been excavated in the northern part of the town along with silos in which the grain for beer-making was stored.

Particularly significant in Hoffman’s settlement studies at Hierakonopolis is that through time (the fourth millennium BC), as summer rains decreased in the low desert and Nile inundations declined, settlement areas shifted closer to the Nile Valley, with a nucleated town developing at the edge and within the floodplain, with outlying cemeteries. Within the Predynastic town, in Locality HK29A, Hoffman excavated the remains of a Predynastic temple, which consisted of a large, walled oval courtyard, begun in early Naqada II times. Reinvestigation of HK29A by Friedman has revealed three phases of use, the last of which has pottery dating to the 1st Dynasty. Analysis of the refuse from HK29A (ceramics, botanical and faunal remains – especially bones from a huge number of animals butchered there) provides evidence of ritual – and not domestic – behavior relating to feasting that took place there.

To the north of HK29A, at HK29B, Thomas Hikade (formerly of the University of British Columbia) has excavated evidence of a large palisade wall (ca. 50 meters long), to the north of which were many very large postholes which may have been for wooden standards or possibly colossal statues. Farther north of these, in HK25, was evidence of a large pillared hall. Both of these structures have ceramics mainly of the Naqada IID period, although there are also earlier and later ceramics. Thus at Hierakonpolis, there was a very large ceremonial complex which extended from HK25 southeast for over 200 meters to HK29A.

Box 5-B Mortuary analysis

In 1971 Lewis Binford published a study of mortuary practices of 40 societies, taken from the Human Relations Area Files, a research unit at Yale University focused on the cross-cultural study of human behavior, society, and culture. Binford's study of mortuary practices ranged from hunter-gatherers with minimal social complexity to settled agriculturalists with more complex social organization. From the results of this study, Binford proposed that "the structural complexity of mortuary ritual" should be directly correlated with "status systems" within a society. His study influenced a number of processual archaeologists analyzing burials, some of whom hypothesized a direct correlation between the complexity of an ancient social structure and its burial patterns.

Binford's study was later criticized because it correlated economic, not social, organization with burial practices. Post-processual critiques of processual mortuary theories also pointed out that burial practices show great variation among cultures. Burial symbolism and forms of burial reflect a society's ideologies, especially concerning death and an afterlife, which are culture specific. While burial evidence may indirectly reflect past social organization, this is not universally true. For example, because of Muslim beliefs the king of Saudi Arabia, who is one of the wealthiest men in the world and at the apex of Saudi socio-political organization, is buried in a simple grave with his body covered only by a shroud.

Unquestionably there are patterns in the burials of any ancient society, which usually change through time. Such patterns can be quantified and analyzed with statistical methods, and this is an important contribution of processual archaeology to mortuary studies. Sometimes these patterns provide evidence of the deceased’s position in society, but not necessarily. Patterns in cemeteries, however, are more difficult to demonstrate when graves have been robbed, which is more often the case than not, and cemeteries may also be disturbed through different natural processes. Although burials can provide much information for archaeologists, burial is only one means of disposing of the dead. How this is done and the form it takes reflect a number of beliefs in a society, especially some form of afterlife in a sphere (hopefully) apart from the living. Other beliefs that influence burial practices include how to honor the dead, and how the living react to death, in which social bonds with the deceased are permanently broken. The issue of how to deal with a decaying corpse is both a pragmatic and an ideological one.

Egyptian mortuary beliefs of the Dynastic period probably evolved in Predynastic Upper Egypt, where there are large cemeteries in which some burials become increasingly elaborate through time. As the Naqada culture moved northward so did its afterlife beliefs, as reflected in their burial practices. But as Alice Stevenson has recently pointed out, Predynastic burials may also reveal reorganized social relationships, identities, and practices, and not simply types of social ranking. Such analyses may better reflect specific historical contexts and transformations in the Predynastic society.

In Dynastic times, burial continued to be important, as is clearly evident from the thousands of burials throughout Egypt from all periods. Burial was directly related to Egyptian beliefs surrounding death and an afterlife, as is known from mortuary texts in tombs. Sometimes tomb inscriptions give specific information about a person's socio-political status, and his/her economic means are often reflected in the burial type. Burial could include a tomb provided with all sorts of goods, and an offering chapel or niche where living persons provided for the deceased in a mortuary cult, but there is no simple correlation between wealth of grave goods and tomb type. For kings, the mortuary cult was practiced in temples, the most elaborate of which were built in western Thebes in the New Kingdom. Reflecting his socio-political position and his control over state resources – as well as his ideological relationship with the gods – the Egyptian king was buried in a significantly different manner from everyone else in the society.

Human remains from burials, from kings to commoners, also need to be studied, not only for age–sex information, but also for possible evidence of trauma, cause of death, occupational stress/disease, and primary or secondary burial, which can often be identified by physical anthropologists in the field. Human remains can also be analyzed to gain information about their diet, as well as parasites and disease (including DNA analysis), which requires highly specialized laboratory studies. Ancient Egyptian mummies, which preserve much more of the human remains than skeletons, have provided much material for modern paleopathological studies. Mummies are also studied now with X-rays and CT-scans in order not to unwrap and destroy them, as was frequently done in the past.

About 2 kilometers from the desert edge in the Wadi Abu el-Suffian (locality HK6) is a large elite cemetery. Friedman's excavations of Tomb 16 in this cemetery, with pottery of Naqada IC–IIA, have revealed a complex which included the burial pit containing over 115 pots, two ceramic funerary masks and other artifacts in exotic materials. Subsidiary graves associated with this burial and connected by wooden walls were for 36 individuals – young men, women, and children. Burials of animals, both domesticated (cattle, dogs, cats, and goats) and wild (an aurochs, hartebeest, three baboons, an elephant and hippopotamus, with evidence that they had been kept in captivity before burial) were also associated with the Tomb 16 complex.

To the south of the Tomb 16 complex, in the center of the HK6 cemetery, is what Friedman calls the "Pillared Hall" or "Funerary Temple precinct," with several tombs that have the earliest known evidence of above-ground funerary architecture. One of these tombs (Tomb 23, with Naqada IIB pottery) included a pillared superstructure covering the rectangular tomb pit and extending to the south, a separate structure that may have been for a large limestone statue where votive objects were left, and a 16 × 9 meter wall (evidence of posts) surrounding the whole complex. The best preserved of these pillared halls is Structure 07 (without a tomb pit), 15 × 10 meters, with 24 columns which were surrounded by a wall. A deposit of whole ostrich eggs was found in one corner of the hall, and in another corner was a deposit with a carved ivory wand and chipped chert arrowheads. A chipped chert ibix and a malachite falcon were also excavated in Structure 07. Thus these pillared hall complexes were probably the focus of mortuary cults and rituals.

Three unusual Naqada III tombs lined in mud-brick have also been excavated in the cemetery on the eastern side of Locality HK6. The earliest of these tombs, Tomb 11, contained the remains of a wooden bed with carved bull's feet, and beads and amulets of exceptional wealth – in gold, silver, carnelian, garnet, copper, turquoise, and lapis lazuli. The largest of these tombs, Tomb 1 (6.5 × 3.5 meters in area and 2.5 meters deep), had a superstructure of wood and reeds, surrounded by a fence. Tomb 10 contained fragments of a ceramic coffin and a clay sealing with two hieroglyphic signs for "town" and "god."

At another Predynastic cemetery (Locality HK43) with pottery of Naqada IIA–IIC, the so-called "working-class" cemetery, a number of well-preserved burials have provided information about human behavior, grooming, and mortuary practices. Well-preserved human hair from the head, face (a beard), and body (pubic and underarm) was also examined. One woman's natural hair, which had been dyed to cover grey hairs, had been augmented with long curled extensions of false hair. Methods to preserve the body in some of these burials included wrapping bones with tree bark, and the use of linen padding and wrapping (on the hands and lower arms).

The well-preserved (and recently excavated) burials from the Locality HK43 cemetery have provided data for a number of scientific analyses. Paleodemographic studies have been conducted by Ernest Batey, and tooth-wear analysis by Aimée Huard suggests a young life expectancy of this buried population – 20–30 years. One hundred eighty-eight individuals were examined for musculoskeletal stress by Melissa Zabecki, who was surprised to find less evidence of heavy workloads than expected for those buried in this working-class cemetery. Nine burials still had desiccated gut contents, which were rehydrated by Ahmed Fahmy, who identified two different diets: more coarsely ground meal (emmer wheat) for adults and a fine cooked meal for children.

Evidence of decapitation of some of the human remains in the Locality HK43 cemetery has also been documented. Dismembered and mutilated skeletons have been found at other Naqada culture cemeteries, including Naqada, Gerza, Adaïma, and some recently reanalyzed burials from Cemetery E at Abydos (excavated in 1909–1910), which had deliberately removed skulls. The cultural meaning of such evidence may represent mortuary ritual or human sacrifice, or even intentional punishment of deviant behavior.

At el-Amra in the Abydos region, where the royal burials of Dynasty 0 and the Early Dynastic Period are located (see 5.5 and 5.6), another large Predynastic/Early Dynastic cemetery, with over 1,000 burials, was excavated in 1900 by English archaeologists David Randall-MacIver and Arthur Mace. Other Predynastic cemeteries are also known in the region. Remains of Predynastic settlements were also investigated in the Abydos region in the early 1900s, and in 1982–1983, Diana Craig Patch (Metropolitan Museum of Art) conducted a large-scale regional survey on the low desert for both settlements and cemeteries. Patch located the remains of small farming villages, 1–2 kilometers apart. In later Predynastic times, there may have been population nucleation within the larger settlements, and sites in the low desert were abandoned for villages within the floodplain, for which no evidence has been recovered. At two late Predynastic sites which were excavated in the early 1900s there is evidence of industrial activities, and in a large Predynastic settlement outside the New Kingdom temple of Sety I stone tools, as well as debris and the raw materials for bead-making, were found.

At el-Mahasna, a Predynastic settlement ca. 10 kilometers to the north of Abydos, beer-brewing facilities, first thought to be pottery kilns, were identified. Recent excavations by David Anderson (University of Wisconsin, La Crosse) in the northern part of el-Mahasna have revealed a post structure ("Block 3") with a mud-plastered floor on which 22 figurines of cattle and seven of seated women had been placed. This was a large ritual building of Naqada IC–IIA–B date, and faunal offerings were associated with it: cattle, wild hunted mammals, two crocodiles, soft-shell turtle and Nile fish.

Other Naqada culture cemeteries and less well-preserved settlement evidence have been excavated in Upper Egypt at sites such as Adaïma, Armant, Hu and Semaineh, and Naga el-Deir (Figure 5.5), but none of these sites became a major center. Geography – and access to trade routes and raw materials for craft goods – may have played an important part in the rise of the centers at Abydos, Naqada, and Hierakonpolis. From Abydos there are important desert routes leading into the Western Desert and from there south into Nubia, but Abydos's major advantage may have been the trade route along the Nile northward/downstream from Upper Egypt. Naqada was located across the river from the Wadi Hammamat, which led to quarrying and mining sites in the Eastern Desert. In Dynastic times the significance of Naqada's location is probably reflected in its name, Nubt, the "city of gold." Hierakonpolis, the southernmost Naqada culture center, probably benefited from increasing trade with the contemporaneous Nubian A-Group culture. At Hierakonpolis there is also evidence of specialized production of pottery and other craft goods – as well as large-scale production of beer. Other prestigious craft goods found in elite Naqada culture burials, such as ripple-flaked knives and carved stone vessels and palettes, also suggest increasing craft specialization and support and facilitation of such industries, especially for the production of prestige goods. Such craft goods validated elite status, as symbolized in burials – and also probably represent increasing regional exchange among Naqadan centers and towns.

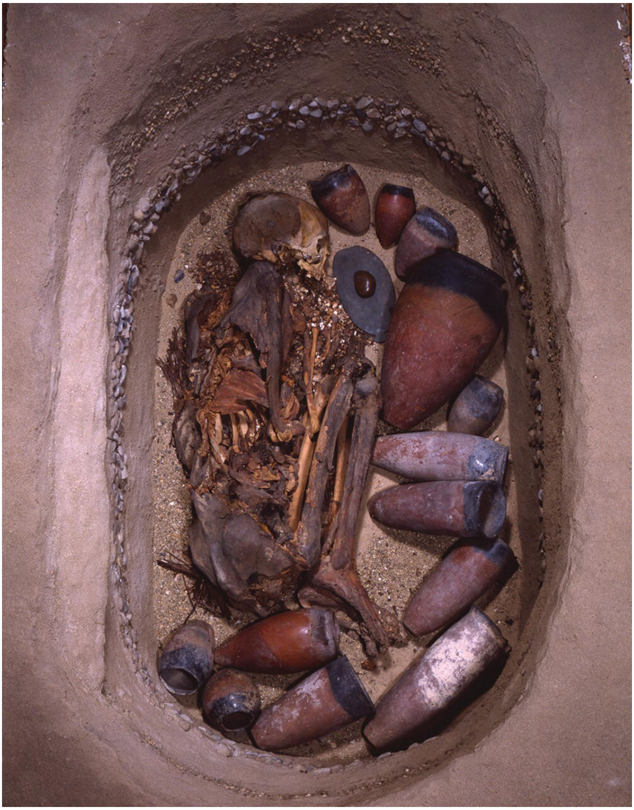


Figure 5.5 Egypt: Predynastic (Naqada culture) burial from Naga el-Deir. Gifts of the Harvard University–Museum of Fine Arts Egyptian Expedition, 1921; the Egyptian Research Account, 1895; and the Egypt Exploration Fund and Chicago Woman's Club, 1899 OIM 11488 (body). Used by permission of The Oriental Institute of The University of Chicago.

But geography does not explain the socio-political forces within these centers in later Predynastic times, which are very difficult to ascertain archaeologically. High-status persons (rulers?) and their elites are probably represented in the small, discrete cemeteries such as Cemetery T at Naqada, the "Pillared Hall" precinct at

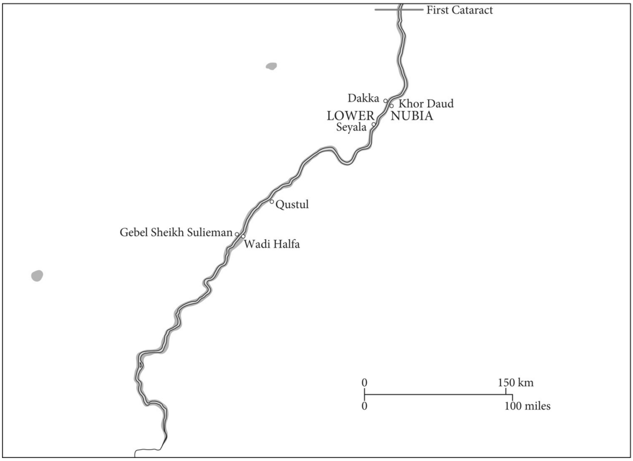
Hierakonpolis Locality HK6, and Cemetery U at Abydos, and the burial evidence in general suggests increasing social differentiation. Regional polities with increasing control over their economies (agriculture, craft production, regional and long-distance trade of goods and materials, and human labor) were undoubtedly developing at such centers in Upper Egypt in later Naqada II times, which probably led to competition, but the structure of these polities, which have been called "chiefdoms," "statelets," "micro-states," "regional states," "proto-states," and "proto-kingdoms" cannot really be ascertained. Such polities were the precursors of the much larger state of Egypt which was forged in Naqada III times.

5.4 Lower Nubia: A-Group Culture

First identified by George Reisner (see 1.4), the A-Group culture in Lower Nubia was contemporaneous with the Naqada culture of Upper Egypt. Like the Naqada culture, the A-Group is known mainly from its cemeteries, and Naqada culture craft goods, obtained through trade, were found in a number of A-Group burials. But A-Group burials also have distinctly different pottery from that of the Naqada culture, including painted "egg-shell" beakers that must have been a type of luxury ware. Together with other archaeological evidence, especially the distribution of sites, the pottery demonstrates the existence of a different culture group. Unlike Naqada burials, A-Group people were sometimes buried with fringed leather garments, bags, and caps; some A-Group cemeteries also contained a large number of animal burials (goats, dogs). Such distinctly different burials, with grave goods which symbolized important beliefs concerning death, also represent a different culture.

In Dynastic times Nubia was the major route through which exotic raw materials from Punt were obtained (see 3.9) and this trade probably developed in Predynastic times, especially as the Naqada culture became more socially and economically complex. Naqada culture burials contain very few Nubian craft goods, which suggests that while Egyptian goods were exported to Nubia and were buried in A-Group graves, A-Group goods were of little interest farther north. Only the raw materials that were transformed into craft goods, such as elephant ivory ornaments, were desired

A-Group imports in Egypt.



Map 5.2 A-Group sites in Nubia.

Mainly excavated in the 1960s Nubian archaeological campaign (see 1.4), A-Group habitations consisted of reed huts and rock shelters; only a few sites had houses with stone foundation slabs. Evidence of agriculture is not found until the Terminal A-Group (contemporaneous with Naqada IIIB/Dynasty 0 and 1st Dynasty), when there are grinding stones and chert blades with sickle sheen. Lower Nubia has a narrow floodplain and, unlike Upper Egypt, was not a good environment for extensive cereal agriculture (see 3.2). But trade with Egypt is definitely attested there by the mid-fourth millennium BC, at the site of Khor Daud. No house structures were found at this site, which consisted of almost 600 storage pits with much pottery, two-thirds of which was Egyptian (Naqada II). It is likely that much of the Naqada pottery in Nubia was used as containers for agricultural products imported from Egypt, such as beer, wine, and oil.

A-Group sites extend from the area of the First Cataract at Aswan, including a village site and cemetery with mixed Nubian and Naqadan materials, recently excavated by Maria Carmela Gatto of the Aswan–Kom Ombo Archaeological Project, to the Second Cataract. A few A-Group sites of the later fourth millennium BC are located to the south of the Second Cataract, in the Batn el-Hagar region. Three large Terminal A-Group centers are known, mainly from their burial evidence, at Sayala, Dakka, and Qustul.

At this time Egyptian copper tools and carved stone vessels are found in elite A-Group burials. In Sayala Cemetery 137 one burial contained two maces with gold handles. It has been suggested that such wealthy burials were those of A-Group chiefs, who would have benefited economically from the trade with Egypt.

Box 5-C Predynastic chronology (taken from *The Oxford History of Ancient Egypt*, edited by Ian Shaw [2000]) and A-Group chronology

Predynastic Chronology	**A-Group Chronology**
Lower Egypt Lower Egyptian cultures, ca. 4000–3200 BC	
Upper Egypt Naqada I (Amratian), ca. 4000–3500 BC Naqada II (Gerzean), ca. 3500–3200 BC ***Naqada III (Semainean)/ Dynasty 0, ca. 3200–3000 BC***	***Lower Nubia*** Early A-Group contemporary with Naqada I and early Naqada II Classic A-Group contemporary with Naqada IID–IIIA Terminal A-Group contemporary with Naqada IIIB/Dynasty 0, 1st Dynasty

Bruce Williams (University of Chicago) has proposed that there were Nubian rulers of the “Qustul Dynasty,” who were buried in Qustul Cemeteries L and S, which date to Naqada III times. Images carved on stone incense burners and found on clay sealings from this period also support this interpretation. Undoubtedly there were Nubians of high socio-economic status at the time, but their political roles are less certain.

5.5 State Formation and Unification

Unification of Egypt into one large territorial state, from the Delta to the First Cataract, occurred in late Predynastic and Dynasty 0 times. There is disagreement as to when this process was completed, and the mechanisms by which this occurred are also not well understood. The consolidation and large-scale organization of this state, however, continued through Early Dynastic times.

Naqada culture expansion northward began in Naqada II times. Petrie excavated a cemetery at Gerza in the Faiyum region with Naqada II grave goods, which may represent southerners moving northward. By Naqada IIC times the (Lower Egyptian culture) site of Ma'adi, just south of Cairo, was abandoned. At Buto in the northern Delta the stratigraphy shows the replacement of Lower Egyptian ceramics by Naqada culture ceramics. This is also demonstrated at other sites in the eastern Delta, including Tell el-Farkha.

Of increasing importance to the Naqada culture, a sea route from the northern Levant to the Nile Delta may have developed in the mid- to later fourth millennium BC. The entry point for this (hypothesized) seafaring trade may have been at Buto, where pottery from coastal Syria (Amuq region) has been identified. This maritime route would have linked Egypt to the broad network of the “Uruk expansion” in greater Mesopotamia, from northwestern Syria to what was then the mouth of the Persian Gulf, but also farther east, to Susa in southwest Iran. The lapis lazuli (originating in Afghanistan), which is found in some Naqada culture burials, may have entered Egypt through this route, as well as the use of cylinder seals, undoubtedly a Mesopotamian invention. Motifs found in Egyptian art, such as in the Decorated Tomb at Hierakonpolis (Figure 5.4), of a high-status male figure dominating two lions to either side, and motifs carved on some late Predynastic palettes, also represent some kind of long-distance connection with the greater Mesopotamian world – a topic which has interested numerous archaeologists and scholars of this period.

The eastern Nile Delta was an important point for the trade and exchange of goods between Egypt and Palestine, where oils, wines, resins and coniferous woods were obtained via overland routes. At Tell el-Farkha donkey bones have been excavated of animals used in transport of such goods, and Marek Chłodnicki has evidence of economic devices from this trade. Although one clay sealing of Lower Egyptian culture and a cylinder seal have been found associated with the earliest (Lower Egyptian) settlement at Tell el-Farkha, there is much more evidence of sealings and seals within the Naqada III and Early Dynastic contexts there – demonstrating the continued economic importance of this site as it became a commercial center and part of the late Naqada culture/Early Dynastic trade network reaching into Palestine.

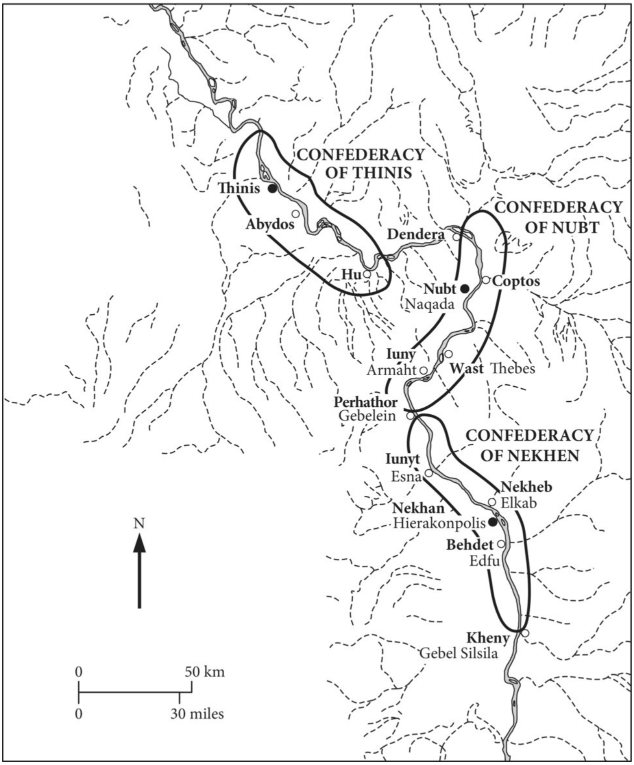
At the site of Minshat Abu Omar in the northeastern Delta an early cemetery has been excavated (1978–1991) by Dietrich Wildung and Karla Kroeper. The earliest burials (MAO I), which date to Naqada IIC–IID, are in shallow pits with only a few grave goods. Later burials (MAO III), which date to Naqada III/Dynasty 0, show abrupt changes in mortuary practices. These graves are rectangular and larger than the earlier ones, and are often lined with mud plaster and roofed with matting. Orientation of the contracted burials changes as well in this group, with the dead resting on the left side, facing east/southeast. The MAO III burials have many more grave goods than the earliest ones, not only a large number of pots, but also carved stone vessels, jewelry, cosmetic artifacts, and copper tools. The latest burials (MAO IV), which date to the 1st and 2nd Dynasties, are even larger and with more grave goods (up to 125) than those of MAO III. In addition, the eight largest of the MAO IV graves are built with mud or mud-brick and internally divided into two or three rooms. The richest of these burials was of a nine-year-old child, which suggests status ascribed from birth and not achieved through life. Thus, not only does the Minshat Abu Omar cemetery evidence point to the presence of Naqada culture there, but the numerous rich burials also suggest the continued economic importance of this region in Early Dynastic times.

The northward expansion of the Naqada culture of Upper Egypt began in Naqada II times, as seen in the archaeological evidence – possibly as Naqada traders moved north and later were followed by colonists. In Naqada III times, when only Naqada ceramics are found in the north, an “integration” model of the two cultures (a term used by Agnieszka Maczynska) may be represented in the archaeological evidence, but the presence of Naqada ceramics there is not necessarily equivalent to one polity.

The socio-political processes of the expanding Naqada culture are difficult to characterize from the mainly mortuary evidence. The highly differentiated Naqada II graves at cemeteries in Upper Egypt, but not in Lower Egypt, are probably symbolic of an increasingly hierarchical society. The highest status burials, such as in Cemetery T at Naqada, may represent competition and aggrandizement of local rulers, whose control and wealth increased as economic interaction and long-distance trade developed in Naqada II times (as evidenced in grave goods). Control of the distribution and production of prestige craft goods, made of exotic imported materials (especially different stones from the Eastern Desert for beads and carved vessels), would also have reinforced the power of rulers in Predynastic centers in Upper Egypt.

The major Naqada culture centers probably consisted of hierarchical groups of a type which Colin Renfrew has called “individualising chiefdoms,” with a political economy of “wealth finance,” a term used by Timothy Earle, in which there was increasing control over local resources and production, and trade and trade routes. Prestige goods found in high-status burials, obtained through wealth finance, had symbolic value for chiefs and would also have been given to their supporters. In Upper Egypt legitimation of such control of the political economy by chiefs became increasingly symbolized in the mortuary cult, perhaps through lineal descent from high-status ancestors, which increasingly legitimized permanent political authority. At Hierakonpolis and el-Mahasna there is also evidence of ritual complexes which were probably associated with feasting and other cult practices, as well as craft production at Hierakonpolis. Although these (and other) centers may have played a role in enhancing the authority of rulers or elites, this connection with sacred power is not clear. Later Predynastic “statelets” (a term used by Bruce Trigger) may have existed at Hierakonpolis, Naqada, and Abydos. Barry Kemp (University of Cambridge) has suggested a model of Predynastic settlement development in Upper Egypt, from small egalitarian communities, to agricultural towns, to incipient city-states (based in part on evidence from Naqada's South Town). According to Kemp, "proto-states" formed in Upper Egypt at Hierakonpolis, Naqada, and Abydos/This, with a hypothetical "proto-kingdom" of all of Upper Egypt followed by unification of the north and south by the 1st Dynasty. Such a model is logical, but there is very little archaeological evidence to demonstrate its validity. In Lower Egypt there is no evidence for a proto-state controlling all of the north, and Christiana Köhler (Institute of Egyptology, University of Vienna) has suggested the existence of "Protodynastic" states in the north as well as in the south.

Names and seated kings carved in the broken top part of the Palermo Stone, a 5th-Dynasty king list (see 2.9), suggest a tradition that there had been rulers before the 1st Dynasty. Egyptologist John Baines (University of Oxford) has pointed out the long iconographic evidence for kingship, beginning with the form of what later becomes known as the Red Crown found on a Naqada I pot – long before kings or a kingdom/small state could have existed. Seen in the painting of the later Naqada II Decorated Tomb at Hierakonpolis (Figure 5.4) are motifs which later become associated with kingship and its ideological role: the leader who dominates dangerous, wild animals and subjugates his enemies. Developing along with complex society in late Predynastic times was the institutionalization of high-status rulers and their legitimation. The later unification of southern and northern Egypt was a creation of rulers who were now kings, the institutionalization of which helped maintain a well-organized state with long-lasting control over a very large territory – that might otherwise have quickly collapsed.


CONFEDERACY OF THINIS
Thinis
Abydos
Dendera
CONFEDERACY OF NUBT
Hu
Nubt
Naqada
Coptos
Iuny
Armaht
Wast
Thebes
Perhathor
Gebelein
CONFEDERACY OF NEKHEN
Iunyt
Esna
Nekheb
Elkab
Nekhan
Hierakonpolis
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50 km
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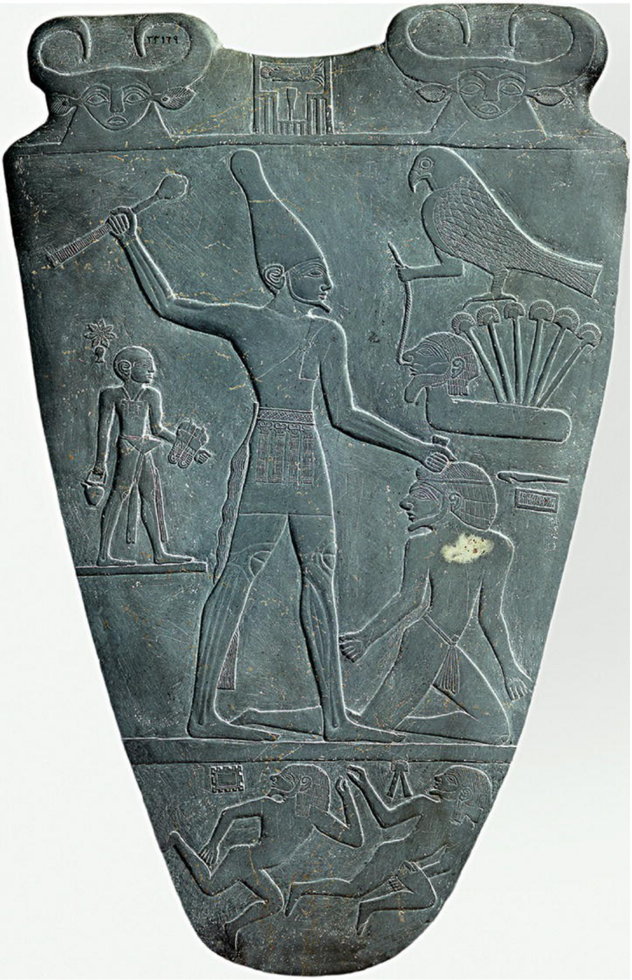
Map 5.3 Hypothetical map of the "Proto-states" of Hierakonpolis, Naqada, and Abydos.

Warfare may have played a role in the final stages of Egyptian unification, but clear evidence of warfare is difficult to demonstrate in the archaeological record. Several carved artifacts that date to the late Predynastic/Dynasty 0 have scenes of warfare or its aftermath. The most famous (and latest) of these is the Narmer Palette, which dates to the end of Dynasty 0 (Figure 5.6). Excavated at Hierakonpolis, this palette has scenes of the victorious king, dead enemies, and vanquished peoples or towns. There is disagreement as to whether a specific historical event is represented by the scenes on the Narmer Palette, but the subject matter suggests warfare in the final phase of the Predynastic and an important symbolic role of the king. Legitimation of kingship also involved the association of rulers with the gods (and their cult centers), and it is significant that in written form the early kings' names are associated with the god Horus, whose cult center was at

Hierakonpolis where this palette was found.



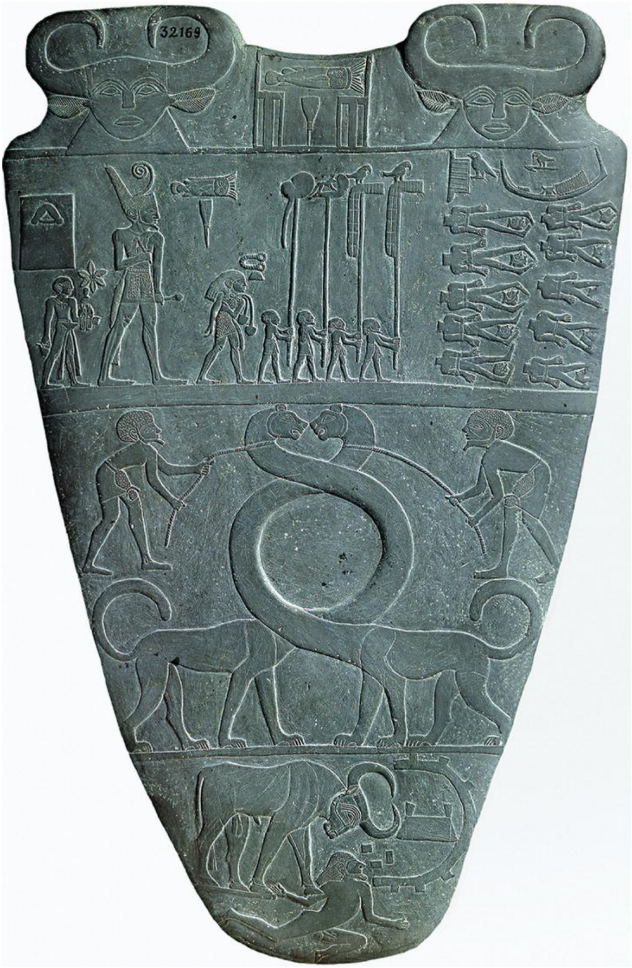


Figure 5.6 Narmer Palette, reverse and obverse.

Source: Jürgen Liepe.

In the Western Desert at Gebel Tjauti, John and Deborah Darnell (Yale University) have found a rock drawing of a scene of conflict, of a man wielding a mace and holding the rope of a bound captive. Signs associated with this drawing possibly identify King Scorpion of Dynasty 0. Dating to Naqada IIIA1, the rock drawing and other scenes like it also suggest the prevalence of warfare in late Predynastic times (but not necessarily specific military victories) – or more generally the manifestation of royal power and the king's monopoly of force.

Alliance building would also have been important in warfare – as well as in polity building. Alliances may be suggested by the four standard bearers on the obverse of the Narmer Palette, and some kind of alliance may have been forged between Hierakonpolis and Abydos, which continued to be important centers in Upper Egypt into late Predynastic and Early Dynastic times.

Tombs excavated by Günter Dreyer at Abydos in Cemeteries U and B may be those of some of the rulers preceding the 1st Dynasty. Cemetery U contained Naqada I and II graves in the northwest part, and later (Naqada III) – and larger – graves are to the northwest and southeast of the earlier ones. Although robbed, one large tomb (U-j) in this cemetery, with radiocarbon dates of ca. 3200–3150 BC, still had much of its subterranean mud-brick structure, as well as wooden beams, matting, and mud-bricks from its roof. The tomb pit was divided into 12 chambers, including a burial chamber with evidence of a wooden shrine and an ivory scepter. About 2,000 ceramic jars were excavated in this tomb, including over 500 vessels with residue of wine. There is debate among specialists as to whether all of these wine jars were imported from Palestine, or some of them were Egyptian-made imitations of Canaanite wares. Sealed with local Nile mud, many of these jars still had impressed sealings with the pictorial images from different cylinder seals.

About 160 small labels in Tomb U-j, originally attached to goods, were inscribed with the earliest known evidence of writing in Egypt (Figure 5.7). Dreyer has hypothesized that some of these signs refer to royal estates, administrative districts, and towns, especially places associated with a ruler named Scorpion, who was probably buried in this tomb. Other signs are numerical, indicative of the quantities of materials to which they were attached. Inked signs on wavy-handled jars in this tomb which contained oil or fat may also refer to the names of places where they originated – although there is certainly disagreement on the meaning of the signs on both the pots and labels.

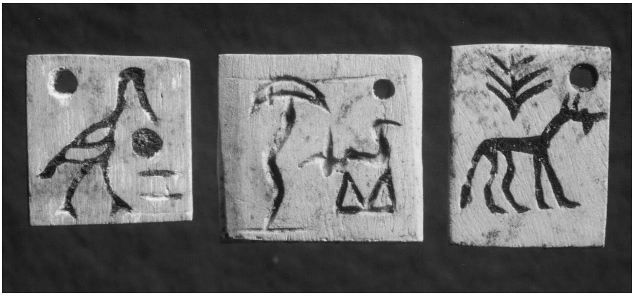


Figure 5.7 Tags from Tomb U-j, Abydos.

Source: German Archaeological Institute Cairo.

Tomb U-j is earlier in date than those of the Dynasty 0 kings buried in Cemetery B at Abydos. Cemetery B, to the south of Cemetery U, is where Werner Kaiser identified the tomb complex of Aḥa, the first king of the 1st Dynasty, as well as double-chambered pit tombs of three kings of Dynasty 0: Iri-Hor, Ka, and Narmer. Kaiser's identifications were confirmed by seal impressions and inscribed artifacts associated with these tombs.

Although the process of incorporating the different Delta groups into this large state is unclear, Egypt was probably unified politically by the time of Dynasty 0 and the Abydos burials of the Dynasty 0 kings are the earliest royal burials of this new state. On the eve of the Dynastic period, kingship had emerged with control over a very large territorial state. Writing had already been invented by this time, as the Tomb U-j labels demonstrate, and the beginning of greater control over the economy (the establishment of royal estates?) can also probably be inferred from these labels.

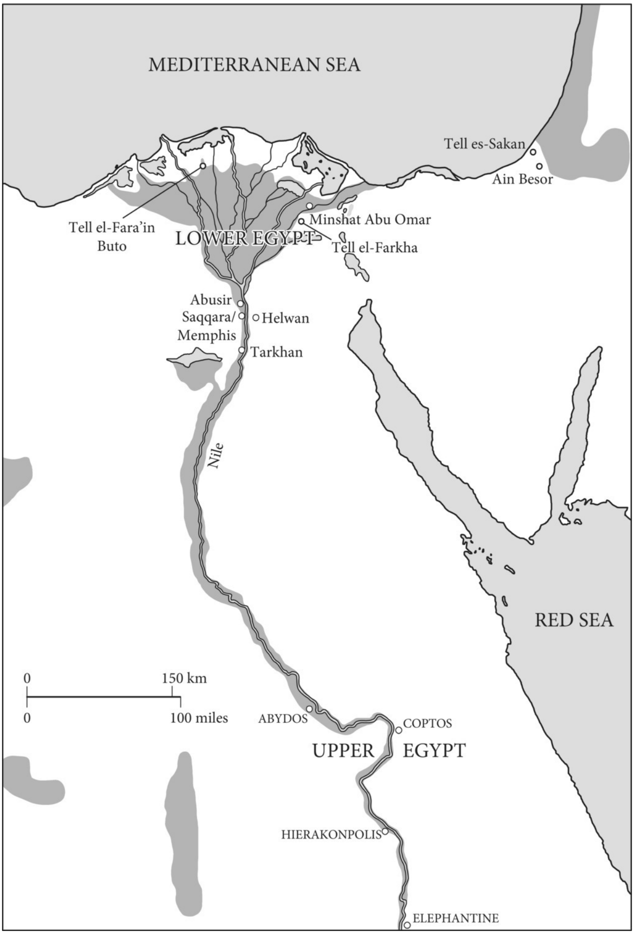
The Early Dynastic State

5.6 Organization and Institutions of the Early Dynastic State

In his important article, "The Urban Revolution" (1950), archaeologist V. Gordon Childe listed traits of early civilizations, most of which characterize what had evolved in Egypt by ca. 3000 BC. Central to the Early Dynastic Egyptian state – and all subsequent dynasties – was the institution of kingship. The king ruled through an administrative bureaucracy, and writing was an important invention which greatly facilitated state administration. The capital of Memphis was founded at this time, although there was a concentration of sites in the general area before the 1st Dynasty. Administrative centers would also have been founded throughout the country – to facilitate governing the large territorial state. But urbanism of the type found in contemporaneous Sumer (in southern Mesopotamia), where there were competing city-states, was not characteristic of Early Dynastic Egypt. This was a moneyless society, and taxes were paid to the state in the form of agricultural surplus, which supported the king, his government, and full-time specialists, including court-sponsored craftsmen. Formal art styles developed, and court-centered art from this time onward becomes distinctively Egyptian in style.

Ancient Egyptian society was highly stratified. Such a society was legitimized by ideology, including the ideology of a king with a divine role – a form of state religion in which he had a special connection to the gods. In Early Dynastic times there were cults of both state and local gods, which did not become syncretized with state religion until later. Perhaps most ideologically important from Early Dynastic times onward was the mortuary cult. Although large cult temples are well preserved from later times, in the Early Dynastic Period the most impressive monumental architecture of the state (and its highest officials) is tombs at Abydos and Saqqara. Conscripted labor, as a form of tax payment to the state, was probably used to build such monuments. There is no evidence for slavery until later, in the second millennium BC, and even then slaves were not employed for large construction projects.

The stability of the Early Dynastic state suggests that institutions of control had been successfully implemented during Dynasty 0. Although there is no evidence for a full-time standing army until the Middle Kingdom, the king must have controlled a military that could be used when needed, internally as well as externally, the latter including expansion into neighboring regions (see 5.8). Evidence of increased long-distance trade is seen in Early Dynastic Egypt, much of which was probably controlled by the crown. Important for such trade was large-scale boat-building, not only to control communication and movement of goods and materials on the Nile, but also for long-distance trade that did not use overland routes. For large seafaring ships, as well as some monumental constructions, cedar was imported from the Levant, which required state logistics.


MEDITERRANEAN SEA
Tell es-Sakan
Ain Besor
Tell el-Fara'in
Buto
LOWER EGYPT
Minshat Abu Omar
Tell el-Farkha
Abusir
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Memphis
Helwan
Tarkhan
Nile
RED SEA
0
150 km
0
100 miles
ABYDOS
COPTOS
UPPER
EGYPT
HIERAKONPOLIS
ELEPHANTINE

Map 5.4 Early Dynastic sites in Egypt and Palestine.

Royal palaces have not been identified archaeologically for the Early Dynastic Period. The best evidence for kingship, symbolized in the mortuary cult, is the royal cemetery at Abydos, in the area called the "Umm el-Qa'ab," which means "mother of pots." First examined by Émile Amélineau, seven tomb complexes were later excavated by Flinders Petrie at the beginning of the 20th century. More recent investigations of the 1st-Dynasty royal tombs have been conducted by Günter Dreyer. Although for some time it was thought that North Saqqara was the burial place of the Early Dynastic kings, because of the large, niched mud-brick tombs there, Werner Kaiser and Barry Kemp have convincingly argued that Abydos was the real royal cemetery (Figure 5.8). Stelae with royal names are found only at Abydos, and the combination of tomb plus royal funerary “enclosure” (located closer to the edge of cultivation at Abydos) is much larger than any tomb at North Saqqara.

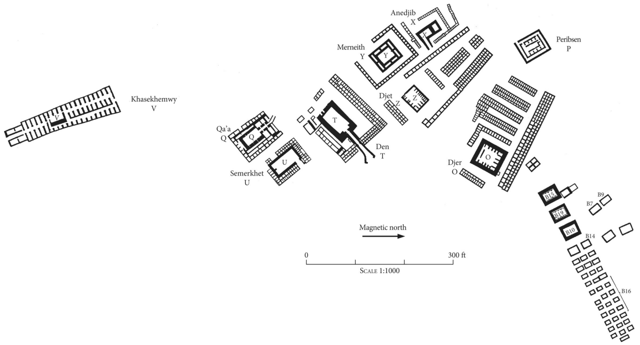

Figure 5.8 Plan of the Early Dynastic Royal Cemetery at Abydos.

Source: W. M. Flinders Petrie, The Royal Tombs of the Earliest Dynasties. London: Egypt Exploration Fund, 1901. Used by permission of the Egypt Exploration Society.

To the southwest of the three large chambers of Aḥa’s tomb complex (Cemetery B) at Abydos in the Umm el-Qa’ab cemetery are the large subterranean tombs of six kings (Djer, Djet, Den, Anedjib, Semerkhet, and Qa’a) and one queen, Merneith, Den’s mother, who probably served as regent. Although the tombs were originally covered with mounds, they had all been robbed in antiquity. Renovations were made during the Middle Kingdom, when Djer’s tomb was converted into a cenotaph for the god Osiris.

Box 5-E State formation

Ancient Egypt is an important example of an early state, and as such it is often discussed in anthropological theories of socio-cultural development. Beginning in the mid-20th century, a number of theoretical works to explain the rise of complex society and early states/civilization appeared, including Julian Steward's *Theory of Culture Change* (1955), Karl Wittfogel's *Oriental Despotism* (1957), and Leslie White's *Evolution of Culture* (1959). Steward's and White's books were particularly influential in the development of theory in processual archaeology during the 1960s.

A major concern of processual archaeology was explaining the processes underlying the origins of the state. Earlier scholars like the 19th-century anthropologist Lewis Henry Morgan had focused on stages that led from savagery to barbarism to civilization. Following Lewis Binford, a number of processual archaeologists sought to reconstruct processes and social organization from archaeological data and many adopted Elman Service's (neo-)evolutionary stages of bands, tribes, chiefdoms, and states.

Morton Fried, a cultural anthropologist, proposed that there was a difference between pristine states, those that developed without having a template of former states, and secondary states, which developed later in response to already existing and increasingly predatory, expansionist states. Although city-states may have arisen somewhat earlier in southern Mesopotamia, the Early Dynastic Egyptian state is unquestionably an example of a pristine state – and one of the earliest known states in the world.

State formation in Egypt has been discussed by Michael Hoffman, whose excavations at Hierakonpolis uncovered evidence of craft specialization (pottery and bead production). Hoffman identified long-distance trade and exchange of goods as prime movers of socio-political complexity – significant factors in the formation of the Egyptian nation-state. Kathryn Bard's analysis of burials at Naqada and Armant suggested increasing social rank and differentiation in the Naqada culture as a factor in the rise of the early state. While disagreeing with Wittfogel's hypothesis that management of (large-scale) irrigation works provided the political structure of the early state, Karl Butzer wrote that the primeval (Predynastic) nomes, with their economic base of hydraulic agriculture, provided the political infrastructure for military ventures that led to state unification. Another perspective is offered by Fekri Hassan, who proposed that in later Predynastic times ideology and ritual systems, especially of a female goddess cult, became increasingly important along with expanded political authority. These and other theories of Egyptian state formation are discussed by Robert Wenke in his overview of the evolution of Egyptian civilization.

More recently, scholars such as Christiana Köhler have argued for distinguishing between the formation of regional "proto-states" in the Nile Valley (later fourth millennium BC), and the later formation of the large territorial state which dominated Upper and Lower Egypt. Looking at the most recent archaeological evidence of the Predynastic cultures, Branislav Anđelković has proposed that Robert Carneiro's "circumscription theory" is the best starting point for modeling state/political evolution in Predynastic Egypt.

Since 1970 some environmentally deterministic theories of state formation have been challenged by post-processual archaeologists (see 1.6) and others, who suggest that focusing too much attention on the environment and population promotes a tendency to ignore ideology, social values, and the actions of individuals (agents). Whether general theories from the social sciences can explain Egyptian phenomena has also been questioned by some Egyptologists.

With more excavated data, much more is known at present about the particular circumstances of the rise of complex society and the early state in Egypt than in the mid-20th century, when generalizing theories for these phenomena in Egypt and elsewhere were being developed. Although such theories may now be seen as having less universal explanatory force, two kinds of evolution can be discussed for ancient Egypt: specific evolution, documenting the trajectory of this ancient culture, and general evolution, comparing Egypt's trajectory to other early civilizations. Important insights may still be obtained from cross-cultural and comparative studies of early civilizations, as Bruce Trigger's book, *Understanding Early Civilizations. A Comparative Study* (2003), so elegantly demonstrates. Charles Spencer's model of territorial expansion and primary state formation also offers a cogent explanation for the formation of the world's six earliest states, in Mesoamerica, Peru, Asia (west, south and east) – and Egypt.

All of the 1st-Dynasty royal burials, including Aḥa's in Cemetery B, were associated with small rectangular burials of men and women, who were probably palace retainers sacrificed at the time of the king's burial, to serve him in the afterlife. In these subsidiary graves were burial goods, such as pots and carved stone vessels, but many also had crudely carved stelae with the names of the deceased in hieroglyphs. Dwarfs, who may have been royal attendants, and dogs were also found in some of these burials. Associated with Aḥa's tomb complex were the burials of 33 young males, 20–25 years old, near which were the burials of seven young lions. Covering an area of ca. 70 × 40 meters, Djer's tomb has the most subsidiary burials (338). After his burial the number of human sacrifices decreased and the practice disappeared in the 2nd Dynasty.

The earlier royal tombs in the Umm el-Qa'ab cemetery (of Djer and Djet) consist of large pits lined with mud-brick, with short walls perpendicular to the pit's inside walls, which formed storage chambers. In the central part of these and the later royal tombs was a large wooden shrine for the burial. By the time of Den's reign an external staircase was added, which made it possible to construct the entire tomb, including roofing, before the king's burial. To prevent grave robbing, the staircase was blocked off by a portcullis, and slabs of black and red granite from Aswan lined the burial chamber – the earliest use of this very hard stone in a royal monument. In this tomb, which has recently been restored, the German archaeologists found the debris of many grave goods, including pots and their seal impressions, stone vessels, inscribed labels, carved ivory and ebony artifacts used for furniture and box inlays, and hundreds of huge wine jars.

In the later tomb of King Semerkhet, entered by a ramp and not a staircase, Petrie found the ramp saturated "three feet" deep with perfumed oil, still strongly scented after 5,000 years. The oil was most likely imported from Palestine. That such a large quantity of imported oil would be consumed in a royal burial suggests the importance of prestige goods for royal burials and long-distance trade on a large scale. Other examples providing evidence of such trade include the bracelets in gold, turquoise, lapis lazuli, and amethyst that Petrie found on a human forearm hidden in a wall of the tomb of Djer.

The last king of the 1st Dynasty, Qa'a, also built a tomb at Abydos, but only two more royal tombs are found there, built by Peribsen and Khasekhemwy, the last two kings of the 2nd Dynasty. The location of the other royal burials of the 2nd Dynasty remains unknown, but the tombs of Hetepsekhemwy, Raneb, and Nynetjer may have been built at Saqqara, where their seal impressions have been found associated with two huge underground galleries to the south of Djoser's Step Pyramid complex (3rd Dynasty). The third royal burial may have originally been in an underground gallery now within Djoser's complex, where thousands of stone vessels of Early Dynastic date have been found. Why these 2nd-Dynasty royal burials were at Saqqara and not in the royal cemetery at Abydos cannot be explained. But perhaps it is better to ask why the tombs of Peribsen and Khasekhemwy were at Abydos, when the evidence points to their 2nd-Dynasty royal predecessors, and 3rd-Dynasty successors, being buried at Saqqara.

The earliest convention of writing the royal name is in the format of the *serekh*, a rectangular design perhaps symbolizing the niched façade of a palace, with the king's name in hieroglyphs above (Figure 5.9). The *serekh* is usually surmounted by the Horus falcon, but Peribsen's *serekh* is surmounted by a "Seth" animal/god (a fantastic animal with a broad tail), which possibly suggests some change in the symbolism of kingship. Although specific events of this period can only be hypothesized, resolution of some kind of political conflict may have occurred under the next king, who first used the Horus name Khasekhem. Later this king's *serekh* was surmounted by both the Horus falcon and the Seth animal, with his name changed to (the dual form) Khasekhemwy, which means "the two powers have appeared." His epithet, "the two lords are at peace with him," may symbolize a reunified country.

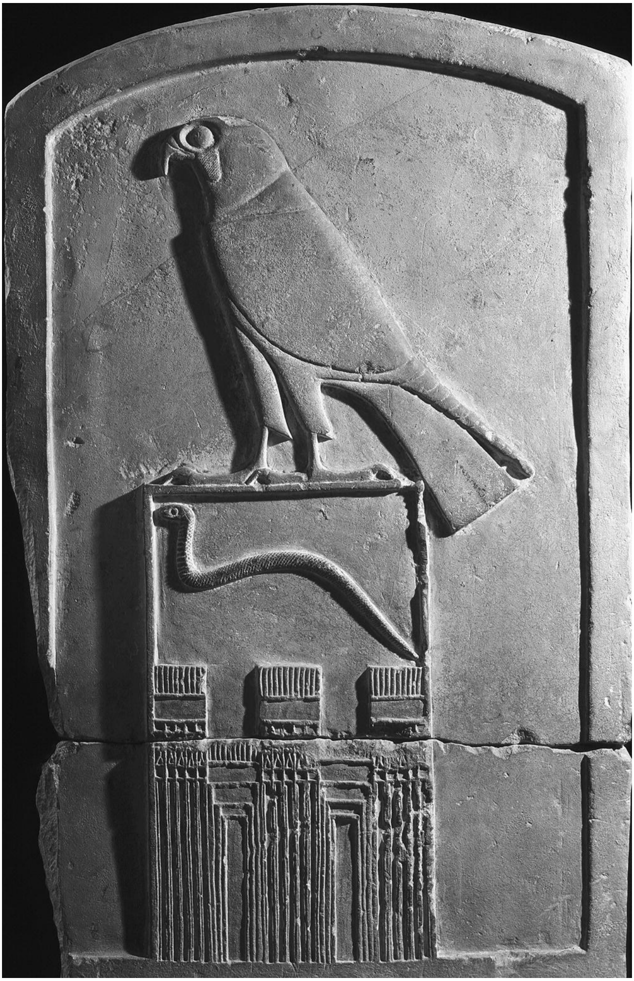

Figure 5.9 1st-Dynasty limestone stela of King Djet with his name framed by the royal *serekh* and surmounted by the Horus falcon, from his tomb at Abydos.

Source: The Art Archive/Musée du Louvre Paris/Dagli Orti/Werner

Forman Archive.

Khasekhemwy’s tomb at Abydos is very unlike the royal 1st-Dynasty tombs there. Consisting of a long “gallery” excavated in a deep pit, it had 58 storage rooms along the sides and a burial chamber made with quarried limestone. Grave goods removed from this tomb by Amélineau included many copper tools and vessels, stone vessels (some with gold covers), and chert tools. Some pots were filled with real fruit and grain.

At Abydos the best examples of monumental architecture in the Early Dynastic Period are the royal funerary enclosures, called “fortresses” by earlier archaeologists working there. Khasekhemwy’s complex, known as the Shunet el-Zebib, is the best preserved of these enclosures, which have been investigated since the 1980s by David O’Connor (Institute of Fine Arts, New York University). Built of mud-brick, the Shunet el-Zebib covers an area 124 × 56 meters, and has 10–11-meter-high walls still standing. Evidence of cult activities within this enclosure include the remains of a chapel, in which incense has been retrieved by the excavators, and beer jars left as offerings near the north gateway. A similar enclosure, though smaller, also associated with Khasekhemwy, is located at Hierakonpolis, which was possibly the enclosure for a palace or temple. Given the scale of such monuments, conscripted labor (corvée) was probably used in their construction.

To the northwest of Djer’s enclosure at Abydos, three new structures – each with small, subsidiary burials – have recently been discovered and excavated (Figure 5.10). Unlike the later and much larger funerary enclosures, each built for one king, these three structures (named Aḥa I, II and III) were all associated with Aḥa. Laurel Bestock (Brown University), the excavator of Aḥa II and III, has suggested that the two smaller enclosures were built next to Aḥa’s larger one (Aḥa I) for two persons of lesser status than the king’s, perhaps members of the royal family. All three structures also contained interior chapels.

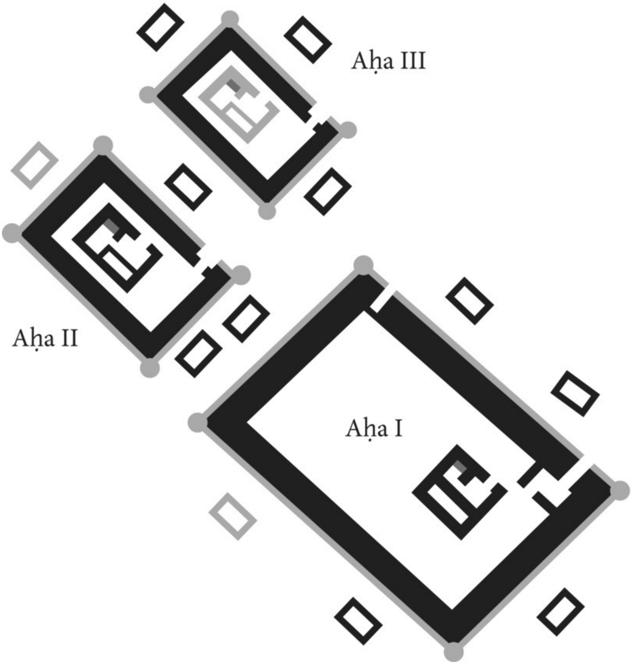

Figure 5.10 Plan of the three funerary enclosures from Aḥa's reign, Abydos.

Source: David O'Connor, Abydos: Egypt's First Pharaohs and the Cult of Osiris. London: Thames & Hudson, 2011, Figure 91. Used by permission of David O'Connor.

The 1st Dynasty funerary enclosures at Abydos also had exterior subsidiary burials, probably of sacrificed humans, and ten donkeys had been buried next to the enclosure (of unknown ownership) southwest of Aḥa I. Fourteen boat burials were also discovered at Abydos by O'Connor's team, just outside the northeast wall of Khasekhemwy's enclosure, although the stratigraphic evidence shows that they are earlier in date than this enclosure, and are aligned with another structure of the 1st Dynasty. Buried in pits were shallow wooden boats 18–21 meters long, with mud-brick placed inside and around the outside of the hulls. As these boat burials had no functional purpose, their meaning must have been symbolic, most likely related to royal use in the afterlife.

At Abydos the paramount role of the king and the ideology of kingship are symbolized in the royal mortuary architecture.

Located in a special cemetery that would later have cultic significance for the god Osiris, the royal 1st-Dynasty tombs symbolized a new political order, with a state religion headed by a king to legitimize this order. Widely held beliefs about death had resulted in the evolution of a mortuary cult, which first developed in Middle and Upper Egypt in the fourth millennium BC. By the 1st Dynasty the king was accorded the most elaborate form of burial in this mortuary cult, which was a politically motivated transformation of the belief system.

What is unusual about the Abydos royal funerary enclosures is that, according to an hypothesis of David O'Connor and Matthew Adams, who excavated the Aḥa I, structure, each enclosure seems to have been intentionally dismantled following the king's death – symbolically transferring the structure for the king's use in his afterlife. The only still-standing enclosure there was that of Khasekhemwy, the last king of the 2nd Dynasty. This last royal monument at Abydos of the Early Dynastic Period possibly represents the beginning of a time when the permanent monumentality of the royal mortuary structure had important symbolic meaning.

The Dynastic state and society were highly stratified. This can be seen in the stratified classes of burials from the 1st Dynasty onward. In the Memphis area the burials also symbolize the administrative hierarchy, which formed the centralized government of the early state. The highest state officials were buried at North Saqqara, where English archaeologists, including Walter Emery, excavated a number of large 1st-Dynasty tombs with elaborately niched mud-brick superstructures before and after World War II. Tomb 3357, of an unknown official of the reign of Aḥa, has a niched superstructure surrounded by a double mud-brick wall, 48.2 × 22 meters in area (Figure 5.11). The superstructure was divided into 27 chambers, below which was the tomb pit with five large chambers. To the north of the tomb was a "model estate," where small-scale rooms, three granaries, and a boat-grave, all in mud-brick were found. With other large burials, North Saqqara continued to be the highest-status place of non-royal burial in the 1st Dynasty, with much smaller contemporaneous tombs to the north in the Wadi Abusir. But in the 2nd Dynasty there is a much greater variety of tomb sizes at

North Saqqara, from tombs as large as those of the 1st Dynasty to quite small ones, sometimes wedged in between the larger tombs.

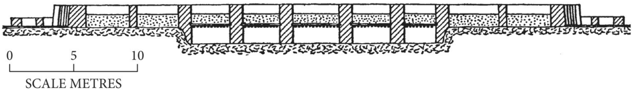

Figure 5.11 Section of the 1st-Dynasty Tomb 3357 at North Saqqara.

Source: W. B. Emery, Archaic Egypt. Harmondsworth: Penguin Books, 1991 [1972], p. 54. Reproduced by permission of Penguin Books Ltd.

Beautifully crafted grave goods in the 1st-Dynasty tombs at North Saqqara, as well as in royal tombs at Abydos, are also evidence of craft specialization, centered around the royal court and its highest officials. The carved and inlaid disks found in the North Saqqara tomb of Hemaka (#3035), who was royal seal bearer (chancellor) under Den, are examples of such artifacts (Figure 5.12). Prestige goods, sometimes made of exotic imported materials, not only represent full-time craft specialization, most likely of artisans working for the court, but also a reward system to honor valued officials – which helped to ensure their loyalty and diligence in the state bureaucracy. But this reward system also seems to have extended to lower-status officials in some of whose tombs imported artifacts are also found.

Across the river from Saqqara is the Naqada III and Early Dynastic cemetery at Helwan, where more than 10,000 burials were excavated by Egyptian archaeologist Z. Y. Saad in the 1940s and 1950s and subsequently by the Egyptian Antiquities Organization. Excavations in what remained of this cemetery resumed in 1997 under the direction of Christiana Köhler, who has also identified elite burials of Naqada IIIA (pre-1st Dynasty) onward there. Significantly, the Helwan Early Dynastic tombs are smaller than the largest ones at North Saqqara; some had a carved offering scene over the entrance. Helwan was probably another cemetery for Memphis officials, but of lower status than those buried at North Saqqara. A number of Early Dynastic cemeteries are found throughout Egypt. At Minshat Abu Omar in the Delta, eight large “elite” burials of the 1st and 2nd Dynasties have been excavated, as well as smaller graves of the period (see 5.5). Early Dynastic graves that were excavated by Petrie at Tarkhan contained contracted burials in pits that were roofed and lined with mud-brick or wood. The simplest burials of this period were in unlined pits, such as those in the Fort Cemetery at Hierakonpolis, and contained only a few pots. Such a variety of tomb and superstructure size and design, and number and type of grave goods, suggest many social levels in Egypt in the Early Dynastic Period, as well the importance of the mortuary cult for all social classes.

More recently, the Tarkhan burials have been studied by Christopher Ellis and Toby Wilkinson. At Tarkhan, as at Helwan, there are a number of Naqada III burials – about 1,300. Differentiated and high-status burials at Tarkhan date to Naqada IIIA–B, but Ellis points out that such differentiation definitely decreased in Naqada IIIC. The burial evidence possibly suggests the existence of a local polity there in Naqada IIIA–B, which was eclipsed in Naqada IIIC times when the Early Dynastic state was emerging with its capital at Memphis. But given that the evidence for such a polity is only from burials, the existence of such a polity is speculative.

The large number of Early Dynastic burials in the Memphis area – on both sides of the river, of high to middle status – represents the major evidence for the emergence of a capital city there, and indirectly for urbanism, as settlement evidence at Memphis from most periods, but especially from the earliest levels, is not well preserved. In 1996 David Jeffreys (University College London) drilled cores in the ground to the east of the North Saqqara cemetery, where the early city would probably have been located. Results suggest that although there may be undisturbed layers of Early Dynastic occupation, they are buried under the water table, requiring expensive excavation techniques.

As the Early Dynastic state consolidated its control throughout Egypt, administrative centers would have been founded to facilitate state control. At Hierakonpolis, in the ancient town (Kom el-Ahmar), an elaborately niched mud-brick gateway was excavated in 1969 and interpreted as the gateway to an Early Dynastic "palace." Possibly this was a royal administrative center, and this type of architecture was symbolic of the early state. At Elephantine a rectangular fortress was built in the 1st Dynasty and by the end of 3rd Dynasty the entire town was fortified. This was an Egyptian town, which by then had become the state's southern border.

Cult centers of deities were undoubtedly located within Early Dynastic towns, but, like the towns, have not been well preserved. Scenes of temples or shrines are found on inscribed labels from 1st-Dynasty tombs, and some inscribed stone vessels found in Djoser's pyramid complex were taken from earlier cult centers. There is also some archaeological evidence of early cult centers, of both local and state gods. In the northern Delta at Buto mud-brick buildings excavated by Thomas von der Way in the 1980s have been identified as an Early Dynastic royal residence complex, with much more of this complex uncovered since excavations resumed there in 2000.

At Tell el-Farkha in the northeast Delta two shrines have been found within a large administrative/cult complex on the Western Kom dating to Dynasty 0/1st Dynasty (see 5.2). In the shrine in the western part of this complex, with strata dating to the early 1st Dynasty, was a jar containing more than 60 small objects – votive figurines of humans and animals in hippopotamus ivory along with models of vessels and other artifacts. More votive objects, including a faience cylinder seal and a whole ostrich egg, were later found there in four storage jars. Tools used to make stone vessels have also been excavated in another room in this part of the complex. But by the 2nd Dynasty the Western Kom, with its cult/administrative complex, was abandoned.

At Coptos in Upper Egypt Petrie excavated three limestone figures of a local fertility god (Min?), which probably date to late Predynastic times (Naqada III), beneath the floor of the later temple of Isis and Min. From pieces in the Ashmolean Museum (Oxford University) a statue originally over 4 meters high can be modeled: its size alone suggests a ceremonial context. In the far south at Elephantine another cult center of a local deity was excavated by German archaeologists. Beneath an 18th-Dynasty temple of the goddess Satet was a very simple early shrine, consisting of several rectangular mud-brick walls within an enclosed space formed naturally by granite boulders. Some of the votive figurines found beneath the later temple were Early Dynastic in style.

Evidence of an Early Dynastic state cult center comes from Hierakonpolis. In the late 19th century British archaeologists James Quibell and Frederick Green excavated within an 18th-Dynasty temple complex at Hierakonpolis, where they found several ritual deposits of earlier artifacts. In or near the so-called "Main Deposit" (Figure 5.13) were the Narmer Palette and macehead, the macehead of King Scorpion, and inscribed stone vessels and a statuette of Khasekhem. Small votive figurines, of humans and animals, were also found along with hundreds of decorated ivories (mostly of hippopotamus canines), including one inscribed with Narmer's name and another with Den's. Also located in the same area were the remains of what was believed to be an early temple, consisting of a low oval revetment of sandstone blocks, ca. 42 × 48 meters, filled with sterile sand brought from the desert. Liam McNamara has suggested that this revetted mound was actually a cult area for the performance of ceremonies associated with kingship. Although in Dynastic times Hierakonpolis/Nekhen became less important as a place, it was the cult center for the god Horus, associated with the living king. It is significant that Narmer's Palette and macehead were found there: they most likely were royal donations to a cult center (of some sort) that was ideologically associated with the king/state from Dynasty 0 onward.

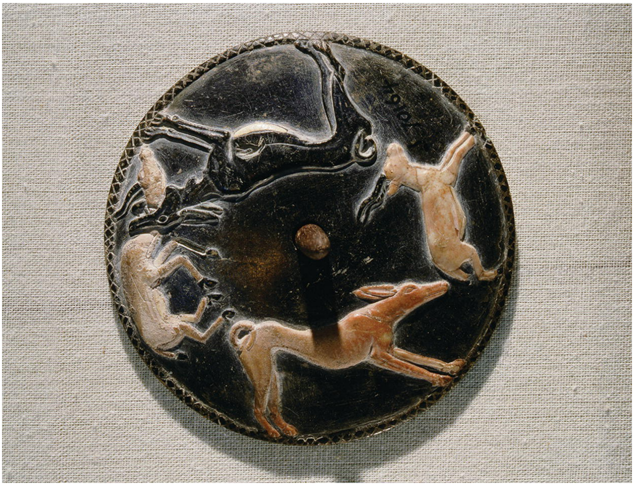

Figure 5.12 Carved disk from Hemaka's tomb, North Saqqara.

Source: Werner Forman Archive/Egyptian Museum, Cairo.

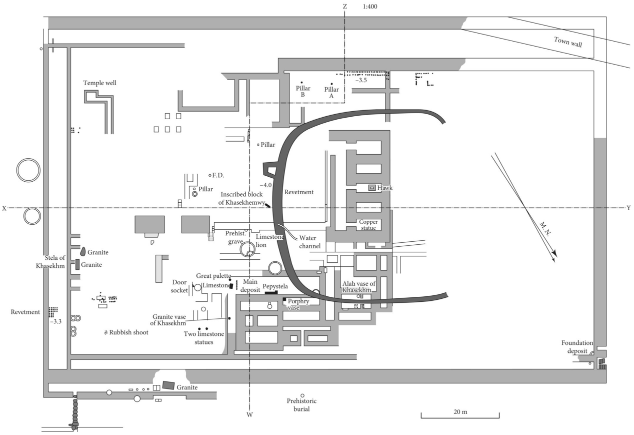
Z
1:400
Town wall
Temple well
Pillar B
Pillar A
−3.5
Pillar
F.D.
Pillar
−4.0
Inscribed block of Khasekhemwy
Revetment
Hawk
X
Y
Copper statue
M.N.
Prehist. grave
Limestone lion
Water channel
Granite
Stela of Khasekhm
Granite
Great palette
Door socket
Limestone
Main deposit
Pepystela
Alah vase of Khasekhm
Porphry vase
Revetment
−3.3
Granite vase of Khasekhm
Rubbish shoot
Two limestone statues
Foundation deposit
Granite
Prehistoric burial
W
20 m

Figure 5.13 Location of the “Main Deposit,” Hierakonpolis.

Source: J. E. Quibell and F. W. Green, *Hierakonpolis II*. London: Egyptian Research Account, 1902, Plate 72.

5.7 Early Writing and Formal Art

Hieroglyphic writing was invented in Egypt long before the 1st Dynasty, but its earliest stages are unknown (see 2.2). The earliest known phonetic writing is found on labels from the late Predynastic Tomb U-j at Abydos (Figure 5.7), which probably relate to administrative activities associated with movement of these goods. Early Dynastic writing is greatly developed in relation to the earliest known hieroglyphs, and it was an innovation that must have been of much use to the early state for economic and administrative purposes. Hieroglyphs appear on royal seal impressions, labels, and potmarks, to identify goods and materials of the king or state. Titles and names of officials are also recorded. Most of the evidence for early writing comes from a mortuary context, and its use was mainly associated with the king and state.

Inscribed labels from the Abydos royal tombs of Dynasty 0 and the 1st Dynasty contain the earliest evidence of recording “year names” of a king’s reign, and it has been suggested that this represents a royal annals system. While there is no archaeological evidence of state taxation based on an agricultural surplus, such as state granaries, recording years by a king's reign would also have been useful to officials who collected taxes and levies. Beginning with Dynasty 0, inked inscriptions on pots from the Abydos tombs imply tax collection (of cereals) from Upper and Lower Egypt, and in the 1st Dynasty the treasury is named (first the "white house" and later the "red house"). The king also directly owned large land-holdings throughout Egypt, and the names of these agricultural estates are preserved in seal impressions and on inscribed vessels. Although this evidence is from the royal tombs, these estates or others probably provided for the king in life as well as in death.

Early writing also appears with scenes on royal commemorative art, such as the Narmer Palette, and from the beginning writing is integrated with representational art. In the royal commemorative art of Dynasty 0 a formal art style is also seen, which in its most formal manifestations was centered on the works of the king and his court. Specific conventions developed in royal art: the king is always shown in a larger scale than all other humans, scenes were arranged in rows (called "registers" by Egyptologists), and the human torso was drawn frontally, with the head, arms, and legs in profile.

Writing (and graphic art) that expressed beliefs in the mortuary cult later achieved a much fuller expression in tombs and pyramid complexes of the Old Kingdom. Administrative documents are not known until the Old Kingdom, and the use of writing for administrative purposes in the Early Dynastic Period can only be implied – mainly from labels, inscriptions, and sealings on tomb goods, and the invention of papyrus.

5.8 The Expanding State

Military control of the unified state did not stop at Egypt's borders, and there is evidence of expanding Egyptian control to the south (Lower Nubia) and northeast (northern Sinai and southern Palestine) in Dynasty 0 and the early 1st Dynasty. One Egyptian motivation was economic, to control the trade of desired raw materials from Palestine and regions to the south of Lower Nubia (see 3.9).

Near modern Gaza City a large, fortified settlement, which was probably an Egyptian colony dating to the Early Bronze Age I, has been excavated at Tell es-Sakan. Egyptian *serekh*s of Dynasty 0 (mostly Narmer's) and the 1st Dynasty have been found on jars, most of which are made of Egyptian clays, at camp sites in the northern Sinai located by Israeli archaeologist Eliezer Oren. Similar potmarks are also found in southern Palestine, such as the site of Ain Besor to the east of Tell es-Sakan. In stratum III of the Ain Besor excavations, 90 fragments of hieroglyphic seal impressions of Egyptian kings were found in association with a mud-brick building. The sealings were impressed in local clay by officials of 1st-Dynasty kings (Djer, Den, Anedjib, and probably Semerkhet). Pottery in this stratum was mainly Egyptian, especially fragments of ceramic molds for making bread. Such evidence suggests Egyptian officials of the state who occupied what may have been a kind of trade emporium through much of the 1st Dynasty. But Egyptian control of southern Palestine did not last into the 2nd Dynasty, when such evidence is no longer found there. Egyptians were probably unable to continue to assert their authority there as the fortified Early Bronze Age II cities of indigenous Canaanite peoples expanded their control over the region, and by the early Old Kingdom Egyptian contact with the Levant shifted to Byblos via a seafaring route. What Egypt lacked in large timbers, used in construction of some monuments and seafaring ships, had to be obtained from the forests of Lebanon.

In Lower Nubia, the indigenous A-Group culture disappears in the archaeological record later in the 1st Dynasty, which most likely coincided with Egyptian military penetration there. Rock art at Gebel Sheikh Suliman near Wadi Halfa (the Second Cataract) of later Predynastic times is usually cited as evidence of an Egyptian military campaign there. Intimidated by Egyptian forces, A-Group peoples eventually left Lower Nubia, but where they went is unknown: some may have moved farther up the Nile beyond Egyptian areas of control. Although evidence is lacking for Egyptian settlements in Lower Nubia during the Early Dynastic Period, their presence at Buhen (at the Second Cataract) is well attested in the Old Kingdom. Indigenous peoples did not occupy Lower Nubia again until late in the Old Kingdom, when the earliest C-Group burials are found – coinciding with loss of direct Egyptian control over the region (see 6.12).

5.9 Who Were the Ancient Egyptians? Physical Anthropology

Much interaction occurred between Egypt and Nubia (and farther south), and between Egypt and southwest Asia. Interaction probably took several different forms, such as migrations of people, inter-marriage, movements of goods and materials, and movements of ideas, and the impact of each kind of interaction remains to be fully documented in trying to explain the past. Thus, there is no simple answer for “Who were the Egyptians who founded the early state and created Egyptian civilization?” This question was first asked by archaeologists working in Egypt in the early 20th century, who proposed that Egyptian civilization was founded by an invading race. But this hypothesis is now discredited given the wealth of Predynastic evidence in Egypt which demonstrates the indigenous origins of this civilization.

Physical anthropology does not classify human remains by “race,” and there are no good criteria, observable or genetic, that can be used to separate all individuals of one “race” from another. Labeling the ancient Egyptians as “white” (Caucasoid) or “black” (Negroid) is therefore not possible. In Egyptian texts from later periods foreigners from countries and regions outside of Egypt are named, and in art they are depicted with different styles of dress, hair, beards, and other attributes, demonstrating clearly perceived ethnic differences. Thus, it is perhaps most convenient to consider who the Dynastic Egyptians were from their own perspective, which was cultural: peoples of the lower Nile Valley under the political authority of the pharaonic state who probably spoke a single language. The ancient Egyptians were adapted, both culturally and physically, for life in this unique environment, with its great agricultural potential. The longevity of pharaonic culture is testament to its successful adaptation there – as well as its ability to adapt to changing conditions through time.

Chapter 6
The Old Kingdom and First Intermediate Period

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Introduction

With the successful consolidation of state control in the first two dynasties (and most likely an increasingly effective bureaucracy), the stage was set for the impressive royal projects of the 3rd and 4th Dynasties. Egypt’s first pyramids represent state control over resources, both material and human, on a new and much larger scale than previously. The state was ruled by a king, whose earthly power and ideological role were symbolized by the stone pyramid, first as a stepped structure and later as a smooth-sided form. The Great Pyramid at Giza, the most impressive of these monuments, was the largest building in the ancient world.

While most of the highest officials of the state were related to the king in the 4th Dynasty, the number of non-royal bureaucrats increased in the following dynasty. Officials built elaborate tombs near the capital and a new type of royal center also appeared in the Memphis region: the sun temple. At the same time royal pyramids were becoming increasingly smaller and less well constructed.

In the late Old Kingdom, during the 6th Dynasty, the power of provincial leaders increased and the crown income declined. The Old Kingdom ended with the death of Pepy II, who possibly had a very long reign, followed by what is called the First Intermediate Period. Little is known about the short period of the 7th and 8th Dynasties, after which centralized control of the country broke down. During the 9th and 10th Dynasties a (local) dynasty which controlled parts of northern Egypt arose at Herakleopolis.

6.1 The Old Kingdom: Overview

Sometimes called the “Age of the Pyramids,” the Old Kingdom consists of the 3rd through 6th Dynasties. The two large pyramids at Giza (belonging to Khufu and his son Khafra) are enormously impressive monuments, representing the highly effective organization of the state: to engineer and design the monuments; plan and organize work programs of great complexity; marshal the goods and materials required; and feed, clothe, and house thousands of workmen. Such accomplishments, symbolized in the royal pyramid, represent the great capabilities of the Old Kingdom state, and are the most visible evidence of the ideological significance of the mortuary cult and the king's role in it.

Central to the political organization of the Old Kingdom was the institution of kingship (see Box 6-A). The state was probably run by royal decree, which guided bureaucrats in government operations. Palaces have not been recovered by archaeology, and the pyramid complex is the most striking form of royal monumental architecture in the Old Kingdom. From the 4th Dynasty onward, the royal mortuary complex consisted not only of the walled pyramid-tomb, but also subsidiary pyramids and a complex of temples connected by a causeway.

Box 6-A Egyptian kingship: names/titles, symbols, crowns, and regalia

The concept of a dual monarchy and kingdom is seen from Early Dynastic times onward: the king was ruler of Upper and Lower Egypt. Perhaps the most prominent symbol of the dual monarchy is the Double Crown, consisting of the White Crown of Upper Egypt and the Red Crown of Lower Egypt, which the king is shown wearing together. Another important symbol of the two kingdoms is found on the king's throne, where a stylized (lotus?) flower and papyrus stalk are bound together, such as that carved on the famous statue of Khafra in the Cairo Museum. Although there is no evidence of two separate kingdoms of Upper and Lower Egypt in Predynastic times that would have been unified to form the Early Dynastic state, the ideology of a dual monarchy was fundamental to Egyptian kingship.

The earliest format in which the king's name appeared is the *serekh* (Figure 5.9), possibly the design of a niched palace gateway above which is the Horus falcon.

Within the *serekh* the individual king's name is written in hieroglyphs, and the whole forms the Horus name. The Horus name is the first of five royal titles/names that were in use by the 5th Dynasty. The second title is the (He of the) Two Ladies, representing the king as manifesting, and under the protection of, the goddesses Nekhbet of Elkab and Hierakonpolis in Upper Egypt, and Wadjet of Buto in Lower Egypt. The third title is the Horus of Gold, with the Horus falcon above the hieroglyphic sign for gold. The last king of the 3rd Dynasty, Huni, was the first ruler whose name regularly appeared in a cartouche, which is an oval design formed by a rope that is tied at the bottom. The cartouche was used for the king's fourth (throne) title/name, and fifth (birth) title/name. The throne title (which came before the birth name in the 1st Dynasty) is often translated as "He of the Sedge and Bee," with the sedge plant(?) symbolic of Upper Egypt and the bee symbolic of Lower Egypt. The throne name, often referred to by Egyptologists as the "prenomen," was assumed at accession. The fifth title (which came before the throne name in the 4th Dynasty, but by the Middle Kingdom was written along with the king's birth name) is Son of Ra. The name given to the king at birth, called the "nomen," is the one that is usually used by historians in king lists.

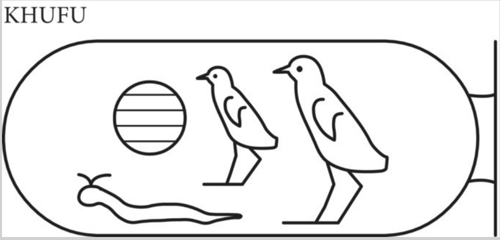


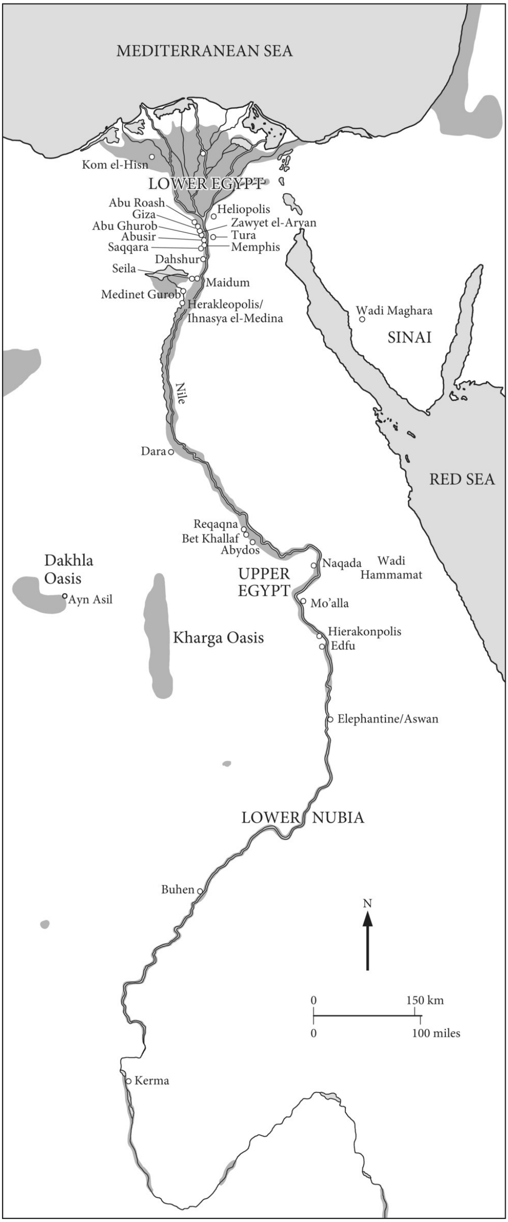
Figure 6.1 Cartouche of Khufu.

Aside from the White and Red Crowns, other crowns/headdresses were reserved for the king, as symbols of his position and authority. The *nemes* headdress, such as

Khafra wears in his seated statue (Figure 6.8), was made of cloth, tied in back with lappets hanging down on the shoulders. From the Middle Kingdom onward the *nemes* headdress was the most important item of royal regalia. In the New Kingdom, when Egypt controlled an empire abroad, kings are often depicted in battle and otherwise wearing the Blue Crown, a kind of high cap decorated with circle designs.

Other symbols of royal authority include the *was* scepter, with a curved prong at the bottom, which in reliefs was held by the king and deities. Two other royal scepters, the shepherd's crook (*heqa*) and flail, are perhaps most famously seen on the three coffins of Tutankhamen (Figure 8.10). Also on these coffins and on the famous gold mask (Plate 8.6) the king wears the *nemes* headdress with symbols of the Two Ladies centered above his forehead (the vulture of the goddess Nekhbet and the cobra of the goddess Wadjet). On some statues of Tutankhamen, such as the two which guarded the entrance to the burial chamber, the king wears the *nemes* headdress with a single cobra, the uraeus, above his forehead. The uraeus was symbolic of the power of the eye of the sun god Ra.

Monumental evidence of the role of the king is supported by textual evidence. The king was believed to be the son of the sun god Ra, the most important state deity in the Old Kingdom. Beginning with Radjedef (who succeeded Khufu), "son of Ra" appears in royal titles, and during the 5th Dynasty kings built sun temple complexes in addition to their pyramid complexes. In the later Pyramid Texts the dead king becomes Osiris, the father of Horus the living king, and in his rebirth he is Ra in a cosmic afterlife.


MEDITERRANEAN SEA
Kom el-Hisn
LOWER EGYPT
Abu Roash
Giza
Abu Ghurob
Abusir
Saqqara
Dahshur
Seila
Medinet Gurob
Heliopolis
Zawyet el-Aryan
Tura
Memphis
Maidum
Herakleopolis/
Ihnasya el-Medina
Wadi Maghara
SINAI
Nile
Dara
RED SEA
Reqaqna
Bet Khallaf
Abydos
Dakhla
Oasis
Ayn Asil
UPPER
EGYPT
Naqada
Wadi
Hammamat
Mo'alla
Kharga Oasis
Hierakonpolis
Edfu
Elephantine/Aswan
LOWER NUBIA
Buhen
N
0
150 km
0
100 miles
Kerma

Map 6.1 Sites in Egypt, Nubia, and the Sinai during the Old Kingdom and First Intermediate Period.

Kingship was also legitimized by the all-encompassing ethical concept of *ma'at*, which was sometimes personified as a goddess.

It was the king's duty to guarantee *ma'at* – an earthly order, which included the annual flooding of the Nile and the agricultural cycle, and the cosmic order of the gods, in which the king was the sole intermediary for his subjects. Often translated as "truth" or "justice," *ma'at* is known from the 2nd/3rd Dynasties onward. Beginning in the 4th Dynasty it is found in royal names and epithets, and became associated with the role of the king and royal ideology. *Ma'at* also justified the ideology of an unchanging social order that was highly stratified, which is clearly demonstrated in the tombs and titles of the Old Kingdom.

The Old Kingdom state was long-lived, with no fundamental disruptions for more than 500 years, and this state faced no serious external threats. Most of the population were peasant farmers living in rural communities. With the materials that sustained life available locally, farmers were basically self-sufficient, but they also probably bartered handicrafts and foodstuffs in local markets. How extensive a system of local markets and non-elite craft production was cannot be determined, but many tomb goods in provincial cemeteries were probably produced locally – and local exchange may have been considerable.

Except for the capital of Memphis, Old Kingdom Egypt was not a state with large urban centers. Memphis was the seat of the royal court and central government, headed by a vizier with executive, fiscal, and judicial duties. It is unlikely that Memphis was a densely populated, walled city as in contemporaneous Sumer, but its spatial organization is unknown. In the low desert beyond the floodplain and city were the cemeteries, for government officials and the king, who may have had a residence near the construction site of his pyramid.

Throughout the country were provincial administrative centers. These were not large urban communities, but were occupied mainly by officials, lower-ranking administrative personnel, and probably some craftsmen. Many administrative centers arose in Early Dynastic times, with the system becoming increasingly organized for state affairs in the early Old Kingdom, as large-scale royal work projects (i.e., pyramid complexes) required more and more resources in the Memphis area. In the later Old Kingdom, provinces were governed by increasingly powerful heads. Local cult centers in the provinces, mainly constructed in mud-brick with some stone elements, such as columns, were relatively small and insignificant compared to the temples associated with royal pyramids in the Memphis area. Typical of such a provincial center may be the Old Kingdom town of Nekhen (Hierakonpolis). It was a walled town, ca. 200 × 300 meters in area (6 hectares), within which were mud-brick buildings, and a walled temple enclosure.

Workers were not slaves, but were conscripted for state projects, as one kind of payment of taxes to the state (corvée labor). A large work force to construct the Giza pyramids would have required a large town to house them. But Mark Lehner's excavations at Giza suggest a more complex arrangement, with laborers sleeping in long narrow "dormitories" to the southeast of the pyramid construction site. They were fed bread produced in nearby bakeries and probably worked in short rotations, while their foremen lived in proper house structures. A larger town, possibly for a permanent workforce, was located to the east, and probably higher-status persons and their families lived in a town to the west, which suggests residences differentiated by class/status.

A major segment of the Old Kingdom economy was state controlled, through land ownership (which could also be revoked), taxation, redistribution, and organization of long-distance trade and mining/quarrying. Three types of land ownership are known: land owned directly by the crown, land owned by cults (mortuary cults of kings and individuals, and the cults of deities), and land owned by private individuals (the produce of which was taxed). In the Early Dynastic Period and early Old Kingdom the crown established its control of much of the land in Egypt by founding agricultural and cattle estates, such as those listed for one year of Sneferu's reign (4th Dynasty) in the Palermo Stone. This may have been some type of internal colonization, but how it was actually accomplished is not known, given that much land was probably already owned by individuals or controlled by collective groups. But there was probably also uncultivated land available for reclamation by the crown.

In the Old Kingdom the largest mortuary cults were for the royal pyramid temples, where the king's statues were daily purified, dressed, and given various offerings and libations by living persons. The daily temple ritual had to be performed and much incense was burned. Special feast days were also celebrated. There is evidence of communities whose sole purpose was the perpetual service and operation of the cult. The various personnel of mortuary cults were supported by donations of agricultural land, many of which were tax exempt, on which commodities were produced. At least 38 estates in both Upper and Lower Egypt are known from reliefs in the Dahshur valley temple of Sneferu's Bent Pyramid, built at the beginning of the 4th Dynasty. Commodities from the estates owned by a royal mortuary cult could also be shared in a complex division – with the palace, cult temple(s), and a number of private mortuary cults, as a papyrus from the pyramid temple of Neferirkara (5th Dynasty) documents. Some temple personnel were full time, including an overseer, some priests (who performed purification ceremonies and read the daily ritual), as well as scribes, artisans, and servants/workmen in the pyramid town. Many priests served part time on a rotating basis, a system which went back at least to the beginning of the Dynastic period and by the late Old Kingdom had become fairly complex. These priests would serve typically for one in ten months, so rations of commodities from cults' estates were redistributed to a large number of people.

Food (bread, beer, grain, and sometimes meat) and cloth were redistributed to officials and workers of the state, but beyond this was a system of royal reward, an important part of the economy that also sustained loyalty to the crown. The king not only gave land to private individuals (which was frequently used to support their mortuary cults), but also rewarded officials with beautiful craft goods, such as jewelry and furniture, produced by highly skilled artisans working for the court. Such luxury goods depended on long-distance trade with southwest Asia and Punt, and mining and quarrying expeditions in the Sinai and Eastern Desert, which were controlled by the state. Exotic raw materials (gold, turquoise, elephant ivory, ebony, cedar for coffins, etc.) were obtained on these expeditions, the scale of which depended on state (and not private) organization and logistics. Thus officials depended on the state not only for their subsistence, but also for much of their material wealth in highly desired luxury craft goods.

While many such craft goods would have been enjoyed in life, some were also placed in tombs and went out of circulation in the economy. Although the massive burial of grave goods in the Early Dynastic Period does not seem to have characterized burials in the Old Kingdom (as known from the few found intact), funeral ceremonies may have resulted in much destruction of wealth. Thus funeral and tomb provisioning was directly connected to the state economy, including long-distance trade and mining/quarrying expeditions, and crafts produced from the imported materials. In the 4th Dynasty, there is evidence of state workshops for craft goods near the Giza pyramids (for stone carving and copper production, but also pottery kilns), but these goods may have been produced mainly for royal consumption and use by pyramid workers.

The non-royal mortuary cult was also connected to the state ideologically, in beliefs concerning the king. Inscriptions of the "offering formula" (*hetep di nesu*) in private tombs begin with the clause "an offering which the king gives to Osiris … of bread, beer, clothing, stone vessels, meat and fowl, and all good things." Thus beliefs of individuals concerning death and providing for the afterlife were associated with the king (and gifts recycled from the gods), and the tomb itself could also be a royal gift. An earthly and cosmic order in which the king was central (especially concerning the afterlife of all of his subjects) legitimized his socio-political role in Egypt – and consequently his economic control over vast resources.

The Early Old Kingdom

6.2 The 3rd Dynasty: Djoser's Step Pyramid at Saqqara

Günter Dreyer has found Djoser's sealings at Khasekhemwy's Abydos tomb, which suggests that Djoser succeeded the last king of the 2nd Dynasty and finished his tomb. But from Djoser's reign onward, kings of the Old Kingdom were buried in the north, and with his pyramid complex royal mortuary architecture takes a more monumental form, representing a new level of royal control of the state. This was the earliest large monument built in stone, an architectural feat much more labor intensive than the mud-brick construction of the earlier royal funerary enclosures and tombs. So impressive was this great monument that Djoser's architect Imhotep (also the royal seal bearer and high priest of the cult of the sun god Ra) was later deified as the son of the god Ptah.

Exploration of the Step Pyramid complex began in the early 19th century, and in the 20th century its main excavator was Jean-Philippe Lauer, a French architect who also reconstructed key portions of the complex. Covering an area of over 15 hectares (545 × 278 meters), the rectangular complex is about 2.5 times as large as the Old Kingdom town of Hierakonpolis. Niched limestone walls surrounded the complex, with only one entrance gateway near the southeastern corner, leading into a roofed passageway with 40 columns. The pyramid is not square but rectangular, and is not situated in the center of the complex. According to Lauer, it was built in six stages. It began as a rectangular, low flat structure termed a mastaba (meaning "bench" in Arabic), which was expanded twice. Only in its fourth stage was a four-stepped pyramid constructed. During the last two building stages the pyramid was enlarged to six steps. Although the three mastabas had been built with rough stone cores covered by finer limestone casing stones, the later stepped structures were built with stone blocks in accretion layers that leaned inward. The final pyramid was 121 × 109 meters in area and 60 meters high (Plate 6.1).

The design of Djoser's complex is unlike the plan of later Old Kingdom pyramid complexes (Figure 6.2). The pyramid temple is located on the north side of the pyramid, where the king's limestone statue (now in the Cairo Museum) was found in a small enclosed chamber termed the *serdab*. Two eye holes were cut for the statue through the *serdab*'s northern wall. At the north end of the pyramid complex is a very large courtyard, still not fully cleared of debris, with an altar near the northern wall. Underground galleries along this wall contained real food – granaries of wheat and barley, but also figs, grapes, and bread. An extensive system of underground galleries, mostly inaccessible, is also located to the west of the pyramid and southern court.

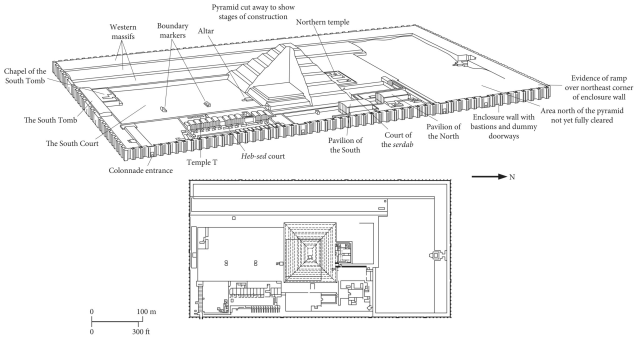

Pyramid cut away to show stages of construction
Western massifs
Boundary markers
Altar
Northern temple
Chapel of the South Tomb
Evidence of ramp over northeast corner of enclosure wall
Area north of the pyramid not yet fully cleared
The South Tomb
Enclosure wall with bastions and dummy doorways
Pavilion of the North
Court of the *serdab*
Pavilion of the South
The South Court
Heb-sed court
Temple T
Colonnade entrance
N
0
100 m
0
300 ft

Figure 6.2 Djoser's Step Pyramid complex, Saqqara.

> Source: Drawn by Philip Winton. From Mark Lehner, *The Complete Pyramids*. London and New York: Thames & Hudson, 1997, pp. 84–85.

To the east of the pyramid are two "dummy" buildings, filled with solid rubble, the so-called Houses of the North and South (possibly symbolic of Upper and Lower Egypt). To the southeast of the pyramid are more dummy buildings facing onto the *sed*-festival court, designed with the façades of shrines for provincial deities. According to Lauer, the "dummy" buildings were partially buried soon after construction, for the king's use in his afterlife. Also partially buried was the so-called South Tomb at the southern end of the complex, with a small chapel along its northern wall. A stairway leads to a series of underground corridors and chambers, including a granite burial vault at the bottom of a large vertical shaft. This vault is too small for the king's burial and it was possibly used to bury his viscera, which would have been embalmed separately. One room in the South Tomb has three niches with finely carved reliefs of the king, including one showing Djoser running the *sed*-festival race (Figure 6.3).

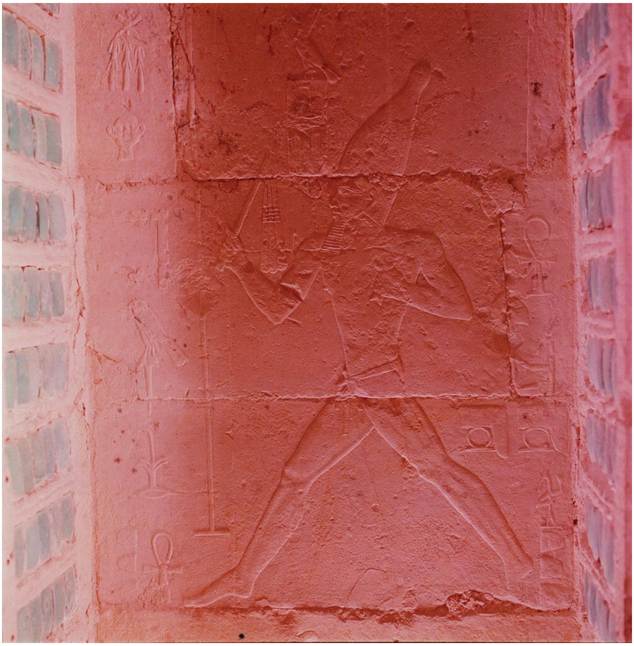


Figure 6.3 Relief of Djoser running the *sed*-festival race, from the so-called "South Tomb" at his Step Pyramid complex, Saqqara.

Source: © Roger Wood/CORBIS.

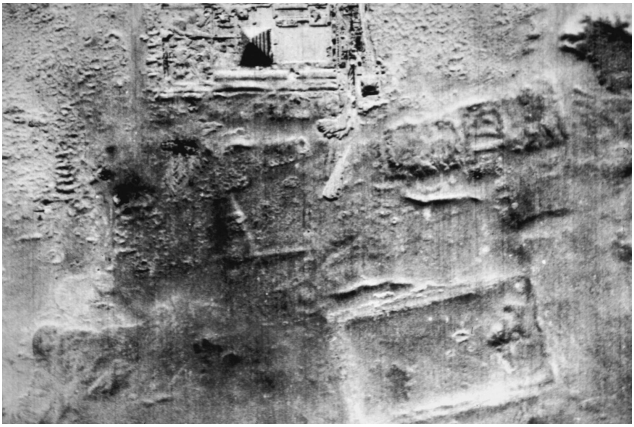


Figure 6.4 Aerial photo of the Step Pyramid complex and three unfinished rectangular pyramid complexes at Saqqara, from old RAF aerial photographs taken in 1947.

Source: Used by permission of the Saqqara Geophysical Survey Project.

Beneath the pyramid are more corridors and chambers, and a burial vault of granite blocks at the bottom of a vertical shaft 28 meters deep. The huge granite plug which blocked the vault's ceiling weighed about 3.5 tons. There is also evidence of an earlier burial vault with travertine walls, and a limestone ceiling decorated with five-pointed stars. The original staircase to the underground rooms was covered over by the later pyramid, and a second descending passageway had to be cut to the north of the pyramid temple. Entered from 11 vertical shafts, some of the subterranean corridors lead to long narrow storerooms for an astonishing number of carved stone vessels (about 40,000!), many of which were made in the first two dynasties. Four galleries were also used for other burials – including an 18-year-old female whose hip bone was found. As in the South Tomb, there were three niches with reliefs of Djoser, and walls decorated with blue-glazed (faïence) tiles.

In the large South Court, between the South Tomb and the pyramid, are curved stone cairns, which have been called territorial markers and are believed to be associated with the *sed*-festival, an important ritual for Egyptian kings known from Dynasty 0/late Predynastic times. The *sed*-festival (*heb-sed*) is sometimes translated as "jubilee": it was a ceremony to ritually renew the powers of the king. In later tradition the *sed*-festival was ideally conducted after a king had reigned for 30 years. Scenes of the *sed*-festival depict the king running between curved markers, and then seated on a double throne (symbolic of Upper and Lower Egypt) on a canopied dais and wearing a knee-length robe. The stone cairns in the Step Pyramid's South Court were for the king's *sed*-festival, symbolizing the king as the territorial claimant of all of Egypt. At the southern end of the complex's *sed*-festival court is a real throne dais with two ramps (for a double throne?), also a constituent part of the festival. According to Barry Kemp, the whole Step Pyramid complex symbolizes, in an eternal form, the royal palace enclosure (in its most elaborate design) in which the king performed rituals associated with Egyptian kingship.

Many of the design elements carved in stone throughout the Step

Pyramid complex mimic architecture in organic materials. The blue faïence tiles in the niches below the pyramid and South Tomb resemble painted matting attached to wooden frames of shrines with curved roofs. Shrines in the *sed*-festival court have been reconstructed as replicating portable tent shrines, with a curved roof and open front, sitting on top of a platform. Some of the columns on the shrine façades have capitals of fluted leaves. The Houses of the North and South are a variation of this type of shrine. Attached to their façades are fluted lotus(?) columns symbolic of southern Egypt and papyrus columns for northern Egypt. The flat roof and façade of Temple T to the west of the *sed*-festival court represent an enclosed tent shrine. Ceiling stones in this temple are carved to look like wooden beams, as are those in the entrance colonnade, which has columns that resemble bundles of reeds. The translation into stone of architecture in perishable materials also symbolizes the eternal nature of this monument. It was the tomb and palace in which royal ritual was to be performed for eternity.

More royal monuments are known for the 3rd Dynasty, but they were never completed. To the southwest of Djoser’s complex is the unfinished step pyramid complex of King Sekhemkhet, excavated by an Egyptian archaeologist, Zakaria Goneim, in the 1950s. This complex has a rectangular enclosure, but only the base of the pyramid was constructed. Also unfinished are galleries beneath the pyramid and a south tomb, in which the remains of a 2-year-old child were found. An empty travertine sarcophagus was also found beneath the center of the pyramid. Some Egyptologists think that a large walled enclosure to the west of Sekhemkhet’s complex, called the Gisr el-Mudir, was built by a king named Nebka, but no tomb has been found there. Another 3rd-Dynasty step pyramid (generally called the “Layer Pyramid”), also unfinished, is located to the north of Saqqara at Zawiyet el-Aryan. It probably belonged to King Khaba.

Although the 3rd-Dynasty kings who succeeded Djoser began to construct pyramid complexes, they were unable to complete them. According to the king lists, Djoser had a longer reign than either Sekhemkhet or Khaba, allowing the grandiose plan for his pyramid complex to be completed during his lifetime. But Djoser also seems to have had greater control of resources – both material and human – for the construction of his mortuary monument than the later kings of this dynasty. The history of the later 3rd Dynasty is not well known, but it has been suggested that the unfinished royal monuments represent a weakening of the office of kingship following Djoser's reign.

The symbolism of the step pyramid form is unknown, but it may be associated with the concept of a royal/state monument. Seven small step pyramids, which are not tombs, were built in the provinces. Five of these are in Upper Egypt, including ones at Elephantine and Naqada. Stephan Seidlmayer has suggested that there may have been plans to build such monuments in each provincial center. Some of them may never have been built, while others may have been destroyed or lost over the millennia. The provincial step pyramids were probably monumental symbols of the crown – especially the royal mortuary cult – and the extraction of resources throughout the country for its support.

The form of the step pyramid, as a royal tomb or monument, did not survive the 3rd Dynasty. With the increased theological importance of the sun god Ra in the subsequent dynasties of the Old Kingdom, the royal pyramid became a smooth-sided form, possibly symbolic of the rays of the sun. Culminating in Djoser's pyramid complex, the large walled funerary enclosure, which may have been symbolic of the royal palace and royal rituals there, also did not survive the 3rd Dynasty, as the pyramid complex became symbolic of the king's connection to Ra.

High officials of the 3rd Dynasty also built tombs at Saqqara, but these were mud-brick mastabas which had evolved from 2nd-Dynasty types. In the 1860s Auguste Mariette examined a number of these tombs, including those of Hesyra and Khabau-Soker. In niches in the western wall of Hesyra's mastaba, which was 39 × 17.4 meters, were finely carved wooden panels of the official shown with his writing equipment, with his titles carved in hieroglyphs. The tomb beneath the mastaba consisted of three levels of chambers and galleries, connected by vertical shafts.

Not all of the large private tombs of the 3rd Dynasty were built in the Memphis region, however. In 1900–1901 John Garstang excavated several 3rd-Dynasty mastaba tombs at Bet Khallaf, to the northwest of Abydos. The largest of these mastabas (K 1) was truly enormous (85.5 × 46.2 meters, and 8 meters high in 1900). Sealings of Djoser were found in this tomb, which contained an elaborate complex of subterranean chambers and galleries entered by a series of stairways and a ramp. Although the last royal burial at Abydos was that of Khasekhemwy (end of the 2nd Dynasty; see 5.6), some very high-status persons were still being buried in the Abydos region (at Bet Khallaf and Reqaqna) in the 3rd Dynasty.

6.3 The 4th Dynasty's First King, Sneferu, and His Three Pyramids

With the 4th Dynasty comes an unprecedented scale of royal construction. Sneferu, the first king of this dynasty, built not one but three large pyramids, and the small step pyramid at Seila in the Faiyum region. These pyramids demonstrate the architectural evolution of the true pyramid design, culminating in the construction of the Great Pyramid at Giza by Sneferu's son Khufu. Altogether, Sneferu's three pyramids equal a mass of stone greater than that of the Great Pyramid.

Sneferu's first pyramid, which some scholars have dated to the late 3rd Dynasty, was built at Maidum (to the east of the small Seila pyramid), possibly where the court was located at the time. The pyramid began as a stepped structure with seven steps, but was enlarged to make eight steps (Figure 6.5). Like Djoser's Step Pyramid, the Maidum pyramid was built in accretion layers leaning inward to the center of the pyramid. The outer layer of each accretion was faced with high-quality limestone from the quarry at Tura, on the east bank of the Nile. According to German archaeologist Rainer Stadelmann, this monument was completed as a true pyramid late in Sneferu's reign.

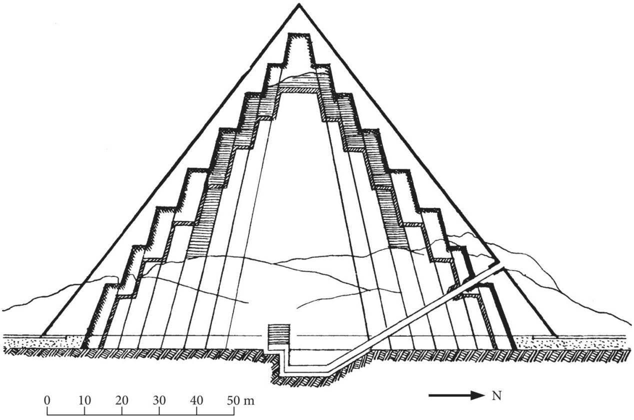


Figure 6.5 Cross-section plan of Sneferu’s Maidum pyramid.

Source: Ahmed Fakhry, *The Pyramids*. Chicago: University of Chicago Press, 1961 (2nd edn., 1974), p. 69. Reprinted by permission of the publisher, the University of Chicago Press.

Today only an inner stepped structure is visible with a huge amount of collapsed stone and rubble around the base of the Maidum pyramid. Many of the outer stones were used as a source of quarried stone in post-pharaonic times, which eventually caused much of the remaining outer structure to collapse. But there is no evidence that the pyramid suddenly collapsed as it was being constructed, as was suggested by Kurt Mendelssohn.

The pyramid’s interior is relatively simple, with a descending passageway from the north face into a series of chambers carved into the bedrock. A vertical shaft leads to the burial chamber, built into the lower body of the pyramid. The ceiling of this chamber shows a new design: it is corbelled, with successively higher courses of stone projecting inward until the ceiling is closed. No sarcophagus was found there.

Sneferu’s Maidum pyramid has most of the constituent elements of later pyramid complexes. The entrance into the pyramid is via a descending passage from the north. The pyramid was walled, with a small subsidiary pyramid on its south side, traces of which were found by Flinders Petrie, who excavated there in the late 19th century. On the east side is a small chapel, and a causeway, cut into the bedrock with mud-brick paving and walls. The causeway leads down to the valley, where only a long mud-brick wall (and not a valley temple) was found. Although the original step pyramid was later renovated into a true four-sided one, probably as a kind of royal cenotaph but not the king's actual tomb, the entire complex seems to have been left unfinished, including the two uninscribed stelae in the eastern chapel.

To the north of Sneferu's Maidum pyramid are some of the largest known mastaba tombs, which were built for high officials, including Neferma'at, one of the king's sons, and his wife Itet. Several large mastabas to the west of the pyramid were left unfinished when the court cemetery was relocated to the north at Dahshur, where Sneferu built his other two pyramids. The chapel of Neferma'at's tomb is decorated with innovative wall scenes, with figures carved into the limestone walls and filled with colored paste. Scenes of food provisioning in Itet's chapel include the beautifully painted vignette of Egyptian geese, with intricate details of their feathers, now in the Cairo Museum. In another mastaba Auguste Mariette found seated statues of Rahotep and Nefert that were exceptionally well preserved (Plate 6.2). With inlaid eyes, these two painted statues of plastered limestone appeared very lifelike to their discoverers. The high quality of sculpture and tomb painting in these Maidum mastaba*s* represents the achievements of court artists working at an artistic level of great refinement.

About the middle of his reign Sneferu abandoned his Maidum pyramid for unknown reasons and began constructing two pyramids farther north at Dahshur. They are known as the North (Red) Pyramid and the so-called Bent Pyramid to the south.

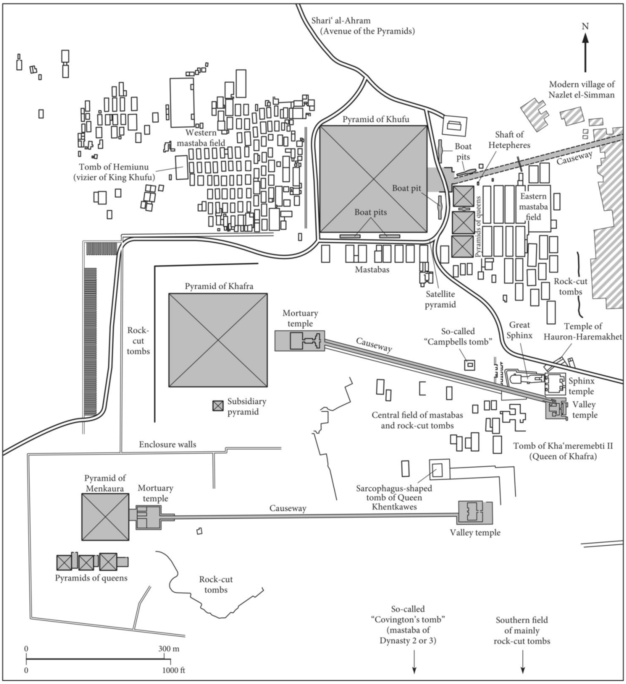
In profile, the Bent Pyramid is truly that: its lower courses have a 55° angle of incline, whereas the upper courses have an incline of only 43°–44°. Although less steep than the incline of the steps of step pyramids, interior accretion layers in the Bent Pyramid's lower part sloped inward at an even steeper angle of 60°, creating an unstable structure which had to be modified. Construction of the upper part of the pyramid was changed to courses of stone blocks laid horizontally. Thus in this pyramid the transition from a stepped form to the four-sided pyramid is seen as the royal architects experimented with a new form and began to understand the stresses involved with such a construction.

Although two corbel-vaulted burial chambers were built inside the Bent Pyramid, with passageways to the west and north sides of the pyramid and a system of portcullis blocks to foil robbers, it was not intended for the king's tomb – possibly because of the problems that developed during its construction. Like the Maidum pyramid, the Bent Pyramid was also a cenotaph, with only a small shrine on its east side. But the Bent Pyramid's small valley temple, the earliest one known, contained statues of the king, and on walls of the courtyard there are reliefs of the king's agricultural estates throughout Egypt, personified as female offering-bearers. This is where the king's cult seems to have been practiced after his burial elsewhere – in the pyramid to the north.

With lessons learned from the two earlier pyramids, Sneferu's North Pyramid at Dahshur was built much more solidly as a true pyramid. Constructed in the body of the pyramid are two corbelled antechambers connected to the passageway to the burial chamber, also with a corbelled roof 15 meters high. A mortuary temple is on the east side, but according to Rainer Stadelmann, the site's excavator, this temple was never finished. Traces of a causeway and a valley temple are now completely gone.

6.4 Khufu's Great Pyramid at Giza

Khufu, who was a son of Sneferu, built the first pyramid at Giza. Although there are Early Dynastic tombs at Giza, it was a new location for the royal cemetery – considerably north of Saqqara. Perhaps the Giza plateau was chosen because its limestone bedrock (called the Muqattam Formation) provided a solid base for the construction of such a huge monument. Khufu's pyramid complex contained the by-then standard elements: a valley temple (unexcavated and probably mostly destroyed because it lies under a modern village), covered causeway, and mortuary temple on the pyramid's east side. Much of the mortuary temple is destroyed, but it originally had a courtyard paved in black basalt, some of which is still there, and columns of red granite. Three subsidiary pyramids belonging to queens are southeast of the mortuary temple, and another small pyramid, perhaps for the king's *ka*, was discovered by Zahi Hawass outside the southeast corner of the pyramid's enclosure wall. Four boat pits lie along the eastern and southern enclosure wall and a fifth one is to the north of the causeway. Two small boat pits are also located between the three queens’ pyramids.


Shari‘ al-Ahram
(Avenue of the Pyramids)
N
Modern village of
Nazlet el-Simman
Pyramid of Khufu
Western
mastaba field
Tomb of Hemiunu
(vizier of King Khufu)
Boat
pits
Shaft of
Hetepheres
Causeway
Boat pit
Eastern
mastaba
field
Pyramids of queens
Boat pits
Mastabas
Satellite
pyramid
Rock-cut
tombs
Pyramid of Khafra
Mortuary
temple
Rock-
cut
tombs
So-called
“Campbells tomb”
Great
Sphinx
Temple of
Hauron-Haremakhet
Causeway
Sphinx
temple
Valley
temple
Subsidiary
pyramid
Central field of mastabas
and rock-cut tombs
Enclosure walls
Tomb of Kha‘meremebti II
(Queen of Khafra)
Pyramid of
Menkaura
Mortuary
temple
Causeway
Sarcophagus-shaped
tomb of Queen
Khentkawes
Valley temple
Pyramids of queens
Rock-cut
tombs
So-called
“Covington’s tomb”
(mastaba of
Dynasty 2 or 3)
Southern field
of mainly
rock-cut tombs
0
300 m
0
1000 ft

Map 6.2 Plan of the three Giza pyramid complexes and nearby tombs.

Source: J. Baines and J. Malek, *Cultural Atlas of Ancient Egypt*. Oxford: Andromeda, 2000.

The pyramid itself is one of the most impressive structures of the ancient world. It is even more impressive when its statistics are given. The Great Pyramid originally contained an estimated 2,300,000 blocks of stone. In weight these blocks averaged about 2.5 tons, although some blocks, such as the base stones, weighed much more. During construction the limestone blocks were laid in horizontal courses, with packing blocks and gypsum mortar placed in between the fairly irregular core blocks. When completed, the pyramid was covered with casing stones of fine Tura limestone, now mostly gone, with an outer angle of incline slightly less than 52°.

The base of the pyramid covers an area of 5.3 hectares. The great accuracy of the surveying required for the pyramid's construction has been confirmed by the Giza Plateau Mapping Project, under the direction of Mark Lehner. The pyramid's sides are aligned to the cardinal points, with only a slight deviation on each side (3′6″ of arc). Each side is 230.3 meters long, with a deviation in accuracy of only 4.4 centimeters, and its original height was 146.7 meters. The level of the base on each side deviates by only 2.1 centimeters.

The interior of Khufu's pyramid is more complex than any other Egyptian pyramid (Figure 6.6). Reached by a descending passage from the north side of the pyramid, the original burial chamber was carved in the bedrock beneath the pyramid, but was never completed. An ascending passage leads to a horizontal passage, at the end of which is the so-called Queen's Chamber, and to the Grand Gallery. Built in the body of the pyramid, the Queen's Chamber may have been planned for the king's burial after the subterranean tomb was abandoned. With a corbelled roof 8.74 meters high, the magnificent Grand Gallery ascends close to 50 meters up into the pyramid. At the top of the Grand Gallery and leading to the king's burial chamber is a short passage designed with three portcullis blocks to seal off the tomb. Another, almost vertical passage leads from the bottom of the Grand Gallery down to the subterranean descending passage. The vertical passage may have been used as the escape route for pyramid workers who sealed the tomb and passages after the king's burial.

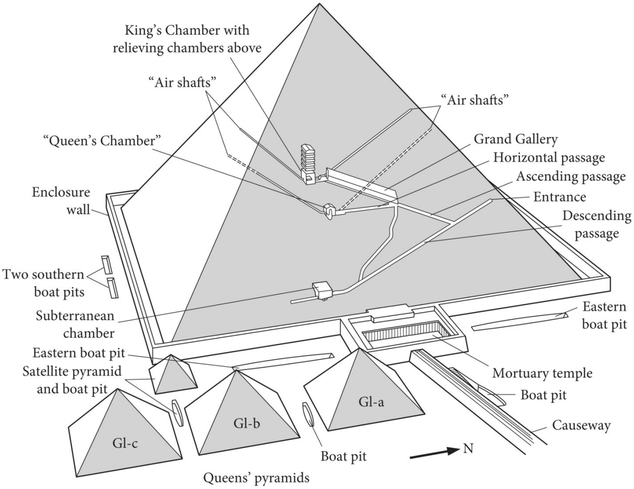

King's Chamber with relieving chambers above
“Air shafts”
“Air shafts”
“Queen's Chamber”
Grand Gallery
Horizontal passage
Ascending passage
Entrance
Descending passage
Enclosure wall
Two southern boat pits
Subterranean chamber
Eastern boat pit
Satellite pyramid and boat pit
Eastern boat pit
Mortuary temple
Boat pit
Causeway
GI-c
GI-b
GI-a
Boat pit
N
Queens' pyramids

Figure 6.6 Plan of Khufu's Great Pyramid at Giza.

> Source: Drawn by Philip Winton. From Mark Lehner, *The Complete Pyramids*. London and New York: Thames & Hudson, 1997, p. 108.

Khufu's burial chamber is lined with huge blocks of red granite from Aswan. A granite sarcophagus is all that remains of what must have been an elaborate burial. Nine granite roof slabs estimated to weigh 25–40 tons each cover the ceiling, spanning the width of the chamber – 5.2 meters. Above the burial chamber are five stress-relieving chambers, air spaces with more granite roof slabs designed to check any possible collapse of the weight of the pyramid so that the burial chamber would remain intact. These chambers were first recorded in 1837 by Richard William Howard Vyse (1784–1853), an English army officer, who used dynamite to reach them. (He also blasted his way into Khafra's pyramid, and blasted off part of the back of the Great Sphinx.) Hieroglyphic graffiti of the names of the workgangs, which include the king's cartouche, are still visible in the top relieving chamber.

Unique so-called "air shafts" extend outward from both the Queen's Chamber and the burial chamber, and may have been symbolic routes for the king's spirit to travel outward. German archaeologists sent a robot probe up one of the shafts of the Queen's Chamber (only 20 centimeters wide and 20 centimeters high). About 65 meters up the shaft the probe was stopped by a limestone plug with two copper pins attached to it. When a hole was later drilled through this plug a second plug blocked further exploration. Since this shaft was blocked, it (and probably the others) could not have been for air.

To the south of the pyramid are two boat pits which are rectangular in area, not boat-shaped as are the other ones in the pyramid complex. Roofed with huge limestone slabs, both of these boat pits contained real boats of cedar, disassembled and resting on the floor. The first boat was discovered in 1954 and it took many years to reassemble and restore the 1,223 pieces. Shaped as the model of a small craft of papyrus reeds, the reassembled boat is huge – 43.3 meters long. It can now be seen in a specially built museum in front of the pyramid (Plate 6.3). The boat's hull was made of huge planks of cedar, each carved to fit the curved form. It was not held together by nails or joints, but was lashed together by ropes drawn through slots carved in the wood. The oars were also lashed to the side of the boat. On top of the hull are an enclosed cabin and canopied tent.

In 1987 a team of scientists led by Farouk El-Baz (Director of Boston University's Center for Remote Sensing) investigated the still closed second boat pit through a specially drilled hole in a ceiling block (Figure 6.7). This boat was not as well preserved as the one found in 1954. After photographs were taken and atmospheric monitors were left inside, the boat was left in its pit. A project to restore and reconstruct this boat is now being conducted by a team of scientists from Waseda University, Tokyo.

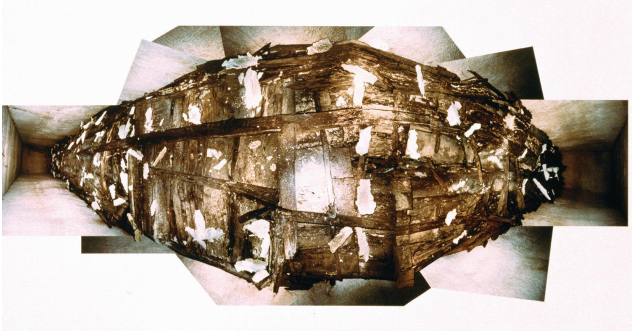


Figure 6.7 Disassembled boat, which was investigated in 1987 and is still in a boat pit next to Khufu's Great Pyramid, Giza.

Source: Claude E. Petrone/National Geographic Stock.

Older boat burials have been excavated at Abydos, aligned with a 1st Dynasty funerary enclosure (see 5.6). Possibly Khufu's boat burials are symbolic, for an afterlife voyage such as is depicted in later images of the sun god Ra. But a better explanation is offered by Mark Lehner, who thinks that Khufu's preserved boats were used in a real funeral voyage, and afterwards had to be ritually buried.

Box 6-B Constructing the Great Pyramid at Giza

The best description of how a Giza pyramid was constructed is to be found in Mark Lehner's *The Complete Pyramids* (1997), from which most of the following information has been taken. Lehner has excavated and worked at Giza for much of his adult life, and he also supervised a very instructive experiment to construct a small pyramid for the PBS television series *Nova*, which can be seen on the video *This Old Pyramid*.

Before construction of the pyramid itself began, the base of Khufu's pyramid was surveyed, and I. E. S. Edwards (British Museum) suggested that the very accurate alignment of its four sides to the four cardinal points was achieved by observing the rising and setting of a star and then bisecting this angle to find true north. This could also have been calculated using the shadows of the rising and setting sun. One north–south side of the pyramid could then be surveyed, possibly using vertical markers set in place with a plumb bob, and the lines of the other sides could be calculated by making a right angle. After surveying was completed, a foundation platform of fine limestone blocks was laid out and leveled with great accuracy. Tools used for surveying and leveling were very simple: a set square (two planks of wood forming a right angle); a plumb bob attached to a rod (for vertical measurements); and a square level (a plumb bob hanging from an A-shaped frame for leveling surfaces).

The large limestone blocks that were used to construct the core of Khufu's pyramid were quarried locally, from a quarry which Lehner has located southeast of the pyramid. Quarrying was done along a narrow channel cut in the bedrock by a workman, and blocks were removed with the use of wooden levers. A finer quality of limestone from the Tura quarries, across the river and to the south of Cairo, was used on the outermost casing blocks covering the pyramid. The huge granite blocks of interior chambers and passages were quarried at Aswan and brought downstream by barge, which then moved through canals to the harbor near the pyramid site. Tools of stone, wood, and copper were used for quarrying limestone, but the much harder granite had to be quarried by creating channels with large hand-held pounders of dolerite, a very hard stone.

Stone blocks were dragged from the quarry site or harbor on a wooden sledge. Even though the Egyptians knew about the wheel, they continued to use this method to move large stone blocks and statues. Different theories have been suggested for a construction ramp(s) up the side(s) of the pyramid, but Lehner thinks that the ramp wrapped around the pyramid. He has also excavated walls southeast of the pyramid that were the retaining walls of a ramp or roadway from the quarries.

The construction ramp was made of stone chips and mortar, reinforced on top with wooden beams, as suggested by evidence of a transport road at a Middle Kingdom pyramid site at Lisht. This road was covered with a layer of limestone chips and gypsum plaster, and Lehner suggests that for the pyramid ramp a top layer of Nile mud, lubricated with water to decrease the friction, would have provided a good surface for pulling a stone block up on a sledge. The use of water is depicted in a scene from a Middle Kingdom tomb at el-Bersha, of the transport of a large statue on a sledge (Figure 7.10).

At the Great Pyramid the stone blocks were laid in horizontal courses, frequently with small stones and debris filling irregular spaces between the blocks. The outermost casing stones of Tura limestone were cut on one side at the angle of the pyramid’s slope. As the construction ramp was disassembled, the exterior sides of casing blocks were dressed with copper chisels.

Lehner has calculated that the Great Pyramid could have been constructed with two work crews, each with 2,000 workers, for quarrying, hauling, and setting the stones. More workers were needed to construct the ramp. These unskilled workers would have been conscripted from the peasant farmer class. Carpenters, metal workers, potters, rope makers, and other specialists were also needed to make the tools and supplies used by the construction workers. Bakers and brewers working at the Heit el-Ghurab site (Figure 6.11) that Lehner is excavating at Giza would have provided food and drink for the workers, who also needed to be supplied with clothes and possibly sandals. Additionally, architects/builders and skilled artisans were probably permanently employed by the king. A total of 20–25,000 skilled and unskilled workers may have made up the entire pyramid work force. If the workers' families were also there, possibly as many as 150,000 people were living at Giza – a huge city that probably sprawled over a very large area.

6.5 The Great Sphinx and Khafra's Pyramid Complex

Radjedef, who followed his father Khufu on the throne but reigned for only eight years, built his pyramid to the north of Giza at Abu Roash. This pyramid seems to have been finished, as demonstrated by recent excavations of a Franco-Swiss team. But little remains of the structure, much of which was destroyed in post-Dynastic times.

Also a son of Khufu, Khafra succeeded his brother on the throne. Although his pyramid at Giza appears to be taller than Khufu's, this is an illusion as it was built on a higher area of the Giza plateau. The base line of the pyramid is 215 meters, and its height was 143.5 meters. Toward its top the pyramid form has a slight twist, evidence of a problem in aligning the four corners to meet at the apex. Inside, the pyramid has a much simpler design than that of Khufu's. Two descending passages lead from the north to a horizontal passage and the burial chamber cut into the bedrock, which contains a black granite sarcophagus. A subsidiary chamber at the bottom of the lower descending passage may have been for a statue (*serdab*).

One subsidiary pyramid is outside the southern wall of the pyramid, and to the east is the mortuary temple, which is much larger than that of Khufu's complex. The temple was designed with an entrance hall, columned court, five niches for the king's statues and five storerooms, and an inner sanctuary – which becomes the standard plan of all later royal mortuary temples. Much of this temple was lined with huge granite blocks; its fore part was constructed with megalithic limestone blocks.

Connecting the mortuary temple to the valley temple, the causeway is almost one-half kilometer long. The inner T-shaped hall of this temple, which is well preserved, was constructed with a travertine floor, and huge pillars, ceiling blocks, and wall casings in polished red granite. Twenty-two bases for statues of the king are along the walls of this hall, with another statue base in the end. One of these statues, of the seated king in polished gneiss, is now in the Cairo Museum (Figure 6.8). The king is depicted wearing the *nemes* headdress (a royal linen head-covering), behind which is the protective falcon deity Horus.

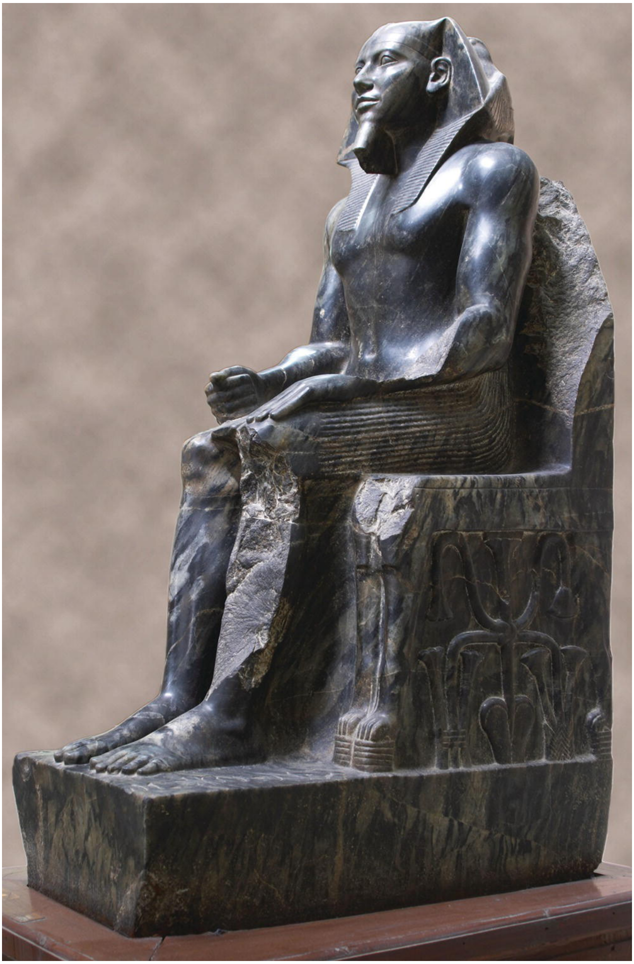


Figure 6.8 Khafra statue from the valley temple of his pyramid complex at Giza.

Source: Ian M. Butterfield (Egypt)/Alamy.

To the north of the valley temple is an unusual second temple which was never finished. Called the Sphinx Temple, it has a court similar in plan to that in Khafra's mortuary temple, and unusually, two sanctuaries on the east and west. To the west of this temple is the Great Sphinx, the southern side of which is aligned with the central axis of the temple (Plate 6.4). The Sphinx was carved out of a huge natural formation in the limestone bedrock, and blocks in the valley temple have been identified as limestone quarried from around the Sphinx's body. Small stone blocks on the Sphinx's body and paws were added later and the monument has been restored many times: in the 18th and 26th Dynasties, in Greco-Roman times, and in the 20th century. With Khafra's head in the *nemes* headdress, the Sphinx's body is that of a crouching lion, a symbol of the king. Lehner has suggested that the east-facing Sphinx is symbolic of the king making offerings to the sun god.

There is New Kingdom evidence of renewed interest in the Sphinx's cult. Amenhotep II built a temple to the northeast of the Sphinx, and many commemorative stelae were left there, including the "Dream Stela" of Thutmose IV. In the text of this stela Thutmose describes falling asleep under the Sphinx's neck. He has a dream in which the Sphinx appears, telling the prince that he will become king if he clears away the sand surrounding the monument and restores it.

To the east of the valley and Sphinx temples was a harbor where materials and supplies could be brought to the site by boat. If not full all year, the harbor, which was probably fed by canals, would have filled with water during the flood season. A stone construction sometimes called a quay is located to the east of Khafra's Sphinx Temple, and it may have also continued in front of the valley temple.

To the south of Giza at Zawiyet el-Aryan an unfinished pyramid which probably dates to the 4th Dynasty was intended to be almost as large as Khafra's. A large pit for the burial chamber, paved in huge blocks of granite and limestone, and a descending passage were carved into the bedrock. An enclosure wall had also been built, but the king who started this project has not been securely identified.

6.6 Menkaura's Giza Pyramid and Its Remarkable Valley Temple Finds

From Khufu's pyramid in the northeast to the smaller unfinished pyramid of Menkaura in the southeast, the southeastern corners of all three Giza pyramids are aligned diagonally. According to

Lehner's calculations, the mass of Menkaura's unfinished pyramid is only one-tenth of that of the Great Pyramid. Originally ca. 65 meters high, with a base of 102.2 × 104.6 meters, Menkaura's pyramid had lower courses covered in costly granite casing stones. A complex arrangement of interior passages and rooms includes a subterranean granite-lined burial chamber, a possible statue chamber with six niches, and a chamber with the false door design carved on its walls. In the burial chamber was an ornately carved sarcophagus, which was shipped to England by Howard Vyse in the 19th century, but it went down with the ship in a Mediterranean storm. Human bones found in an upper chamber have been radiocarbon dated, but are from post-pharaonic times. Remains of a young female were also found in one of the three so-called queens' pyramids to the south of the pyramid's enclosure wall. Two of these pyramids either are unfinished or were intentionally built in stepped form.

Both the mortuary and valley temples of Menkaura's pyramid complex were unfinished in stone, and were hurriedly completed in mud-brick. These temples were excavated in the early 20th century by George Reisner (see 1.4), who meticulously recorded all finds in drawings, photographs, and field notes. In the mortuary temple Reisner found fragments of a colossal travertine statue of Menkaura, and in the valley temple were triad statues of the king with the goddess Hathor and a provincial deity.

The exquisitely carved pair statue of Menkaura embraced by his chief wife Khamerernebty II is one of the great masterpieces of Old Kingdom art (Plate 6.5). Its ancient appearance would have been quite different, however, as traces of paint still visible on the surface suggest. Reisner also found 15 statuettes of the king in various stages of carving, which demonstrate the step-by-step methods used by the royal sculptors.

The 4th Dynasty ends with the short reign of Shepseskaf, Menkaura's successor, who built a very large mastaba tomb (99.6 × 74.4 meters), not a pyramid, at South Saqqara now called the Mastabat el-Fara'un (Figure 6.9). Surrounded by a double wall, the monument has most of the elements of a pyramid complex: mortuary temple on the east, causeway, and (an unexcavated) valley temple. The burial chamber was lined with granite blocks, forming a vaulted ceiling.

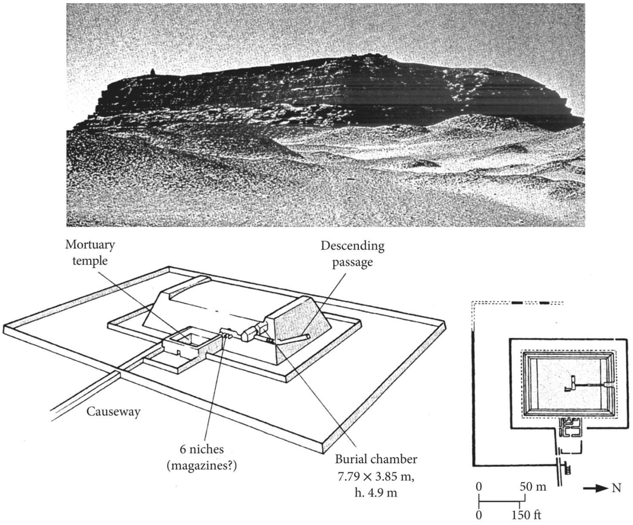


Figure 6.9 Plan of Shepseskaf's tomb at Zawiyet el-Aryan.

Source: Drawn by Philip Winton. From Mark Lehner, *The Complete Pyramids*. London and New York: Thames & Hudson, 1997, p. 139.

It is probably significant that Shepseskaf's funerary monument and Menkaura's pyramid were much smaller than the other two Giza pyramids. Menkaura probably reigned for 29 years, and even though part of his pyramid was built with costly granite casing blocks brought by barge from Aswan, it was planned on a much smaller scale than those of his predecessors. Lehner has suggested that perhaps there was much less space on the Giza plateau to build a third large pyramid. Others have suggested that as the pyramid became smaller in scale, the temple complexes expanded – which is definitely seen in the later Old Kingdom, when the pyramids were not only much smaller but were also less solidly constructed. This may reflect an ideological change connected to the increasing importance of the cult of the sun god, with less importance placed on the actual tomb of the king.

There also may have been economic reasons that all other royal tombs after those of Khufu and Khafra were much smaller. Possibly later kings did not have the economic means to build such enormous monuments, nor the ideological means to justify such constructions. But perhaps it is also worth asking why the pyramids of Sneferu, Khufu, and Khafra are such aberrations in size compared to all the others of the Old Kingdom.

6.7 Giza Pyramid Towns

In his excavations at Menkaura's valley temple, George Reisner found the remains of small mud-brick houses next to the temple wall. Occupation expanded eventually into the valley temple, where more small houses and storage facilities were found. The cult of the dead king continued to be serviced in the valley temple, but the growing number of people living in this town may represent more and more people taking advantage of the tax-free status of Menkaura's pious foundation.

Associated with the Giza mastaba tomb of Queen Khentkawes of the late 4th Dynasty is a mud-brick settlement with houses of the later Old Kingdom (Figure 6.10), located near Menkaura's valley temple. Built along the tomb's causeway with an extension to the south, the settlement was excavated by Egyptian archaeologist Selim Hassan in the 1930s. This is where the personnel associated with the queen's mortuary cult were housed in small modular structures, with larger houses in the southern extension. Recent excavations there by Mark Lehner have revealed two phases of building of this town, with different wall plans. A monumental ramp built between the Menkaura valley temple and the south extension of Khentkawes's town was possibly the major access route to the Giza cemetery. To the north of this ramp a large water tank lined with limestone and extramural houses of fieldstone and mud-brick have also been excavated. Lehner has also located a much lower basin to the east of Khentkawes's town, which may have been a harbor associated with the complex, with a structure on the east side with round silos where grain was stored and probably distributed.

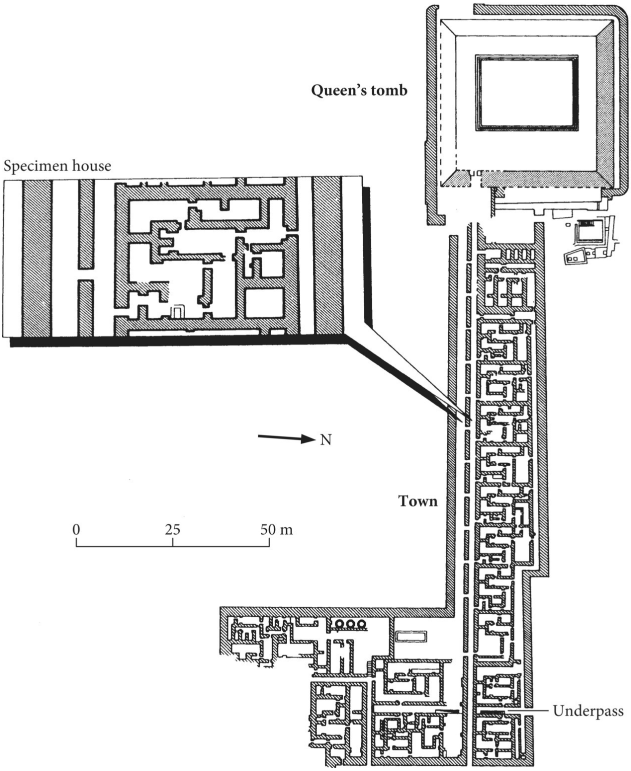


Figure 6.10 Plan of the funerary cult town of Queen Khentkawes, Giza.

Source: B. J. Kemp, Ancient Egypt: *Anatomy of a Civilization.* London: Routledge, 1989, Figure 50. Copyright © 1989 by Routledge. Reproduced by permission of Taylor and Francis Books UK.

Petrie suggested that the long narrow rooms to the west of Khafra's pyramid, aligned north–south, were the remains of a pyramid workmen's town, but Lehner's excavations there found evidence of royal craft workshops. Although most of these rooms had been carefully cleaned out, sculptor's models, trial sculptures, fragments of small statues, debris from carving in various stones, and stone tools were all excavated there. Another industrial area for working/carving travertine, associated with ovens and hearths possibly used for the production of pots and copper tools, was excavated to the southeast of Menkaura's pyramid by Abdel Aziz Saleh (Cairo University) in the 1970s.

The largest known pyramid town at Giza is being excavated by Mark Lehner (Figure 6.11). About 400 meters to the east of Menkaura's valley temple and just south of a huge stone wall (7 meters wide) called the "Wall of the Crow," is a 4th-Dynasty complex, the Heit el-Ghurab site. The walled town was organized in four sets of long narrow galleries with mud-brick walls (the Gallery Complex) separated by cross streets. At the south end of one of the galleries (Gallery III.4) are several small rooms, some of which were for cooking and food preparation. To the north of these rooms is the largest room, with a central row of columns to support the roof. Sleeping platforms were found to either side of the row of columns, and Lehner thinks that this was some kind of barracks where 40–50 workers could sleep: they were probably rotated in and worked there for short periods of time. A two-room bakery was excavated in this area in 1991, with ceramic bread molds and vats for mixing dough still in place, and evidence of fish processing was also found. Much more evidence of the bakeries which supplied bread to the workers has since been excavated. In another area there was evidence of granite working, including a thick layer of granite dust and chips, produced by pounding granite blocks with stone mauls.

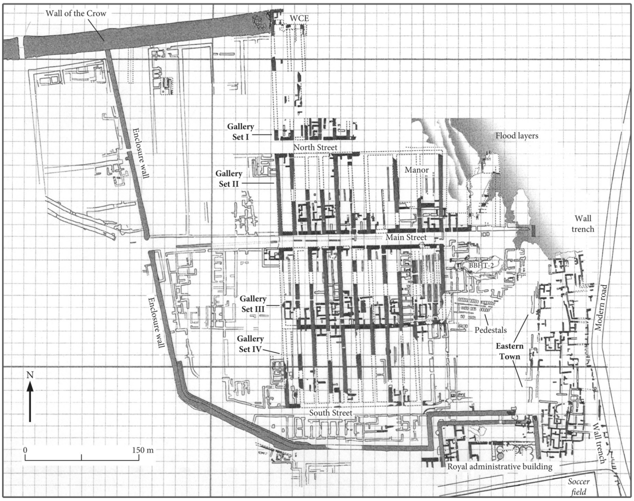

Wall of the Crow
WCE
Enclosure wall
Gallery Set I
North Street
Flood layers
Gallery Set II
Manor
Wall trench
Main Street
BBHT-2
Gallery Set III
Modern road
Enclosure wall
Pedestals
Gallery Set IV
Eastern Town
N
0
150 m
South Street
Wall trench
Royal administrative building
Soccer field

Figure 6.11 4th-Dynasty pyramid town at Giza, excavated by Mark Lehner.

Source: Mark Lehner, "The Pyramid Age Settlement of the Southern

Mount at Giza," JARCE39 (2002), p. 31, Figure 2. Used by permission of the American Research Center in Egypt, Inc. (ARCE).

To the southeast of the long galleries is what has been called the Royal Administrative Building surrounded by a double wall, where many fragments of mud sealings of Khafra and Menkaura have been found. A sunken court with silos for grain storage has been excavated in this building, which probably supplied grain to the numerous site bakeries. Small clay "tokens" found there in round or oval shapes may have been used as accounting devices for bread. Evidence of copper and alabaster working has also been excavated in the building's northwest corner.

Box 6-C Botanical and faunal analyses at Kom el-Hisn, a Delta cattle estate

Located in the northwest Delta, the site of Kom el-Hisn was investigated by Robert Wenke (University of Washington) in the mid-1980s. Remains of mud-brick buildings were excavated there with evidence of domestic activities (hearths, storage pits, etc.). Calibrated radiocarbon dates and pottery place the major period of site occupation in the 5th and 6th Dynasties.

The excavated animal bones at Kom el-Hisn were studied by Richard Redding. Bones of wild waterfowl and fish, as well as domesticated sheep, goats, and pigs were identified. The botanical remains suggested an unusual interpretation of the faunal evidence. Although there were very few cattle bones, a large quantity of cattle dung had probably been used at the site – as dung cakes that were burned for cooking, which is still practiced in rural Egypt. Marie-Francine Moens and Wilma Wetterstrom identified the carbonized remains of plants that most likely would be found in cakes of cattle dung. These included animal fodder (such as clover), field weeds, cereal straw, and reeds and sedges. The types of plant remains in the dung cakes, and the absence of grass seeds, also suggest that the cattle may have been raised in pens where they were fed fodder.

The evidence of very few cattle bones and large quantities of cattle dung used for fuel may indicate that cattle were raised at Kom el-Hisn and shipped out for consumption elsewhere – possibly for support of an Old Kingdom pious foundation or a state construction project. Cattle that were kept in stables and fattened for slaughter are also known in reliefs. The people living at Kom el-Hisn then subsisted on cultivated wheat and barley that was supplemented by the meat of other wild and domesticated animals.

At Mark Lehner's excavations at the Giza Heit el-Ghurab site, Redding found a high proportion of cattle bones, mostly of males under 2 years old. The age/sex data of the cattle suggest that males were bred for consumption and then butchered at Giza at an optimal age for their meat. Since there was no evidence of dung cakes for fuel at Giza – where the evidence of wood was abundant (dense deposits of charcoal) – the cattle were raised elsewhere (such as at estates like Kom el-Hisn), where their dung accumulated and was used for fuel. Fattened cattle were then sent from a cattle-raising estate in rural Egypt to a state production facility or mortuary cult in the Memphis area.

To the east of the Gallery Complex is the "Eastern Town," with much less formal architecture than in the Gallery Complex. Lehner has described the non-orthogonal village layout of this town and its warren-like character. Possibly many of the pyramid workers were housed more permanently with their families in the Eastern Town, where courtyards, corridors, and houses with small rooms and thin mud-brick walls have been found. To the southwest of the Gallery Complex is the "Western Town," with larger houses for higher-status officials (and their families) – including one (House Unit 1) with a scribes' workshop – than those in the Eastern Town. The Western Town was where grain processing was done, as evidenced by grinding stones found there and not in the Gallery Complex. In the Western Town Lehner has also excavated what he calls the "Pedestal" building, which may have been used for evaporative cooling for the malting of beer. To the south of the Western Town a structure called the "Standing Walled Island" has been excavated where cattle and perhaps sheep and goats were kept in a corral before being slaughtered to provide meat for the large settlement.

Most of the settlement complex was demolished and abandoned at the end of the 4th Dynasty after the enormous pyramid construction projects were finished, but evidence of sealings suggests that the Eastern Town may have had continued occupation into the 5th Dynasty.

6.8 Giza Mastabas, Queen Hetepheres's Hidden "Tomb," and the Workmen's Cemetery

Although few of the lowest-status persons were buried at Giza – the unskilled laborers who quarried stone and hauled blocks up to the pyramids – Giza tombs demonstrate a stratified society, from the king and royal family, to high officials, to various overseers and elite workers at the pyramids. To the east and west of Khufu's pyramid are a number of high-status mastaba tombs of the 4th Dynasty. At that time, the office of vizier was held by a number of royal princes – which probably reflects tight family control of the state. In life and in death these viziers retained close ties to the king.

Many of the mastaba*s* associated with Khufu's pyramid were excavated by George Reisner. Essentially these mastaba*s* were solid structures with stone casing over a core filling. Inside was an offering chamber with a carved "false" door, the symbolic entrance through which the deceased traveled to receive offerings. A vertical shaft led to the burial chamber cut below in the bedrock. The tomb of Queen Meresankh III, one of Khafra's queens, has several subterranean chambers, including a chapel with an impressive row of figures carved against the wall.

The mastaba*s* were initially laid out in planned rows, with larger double tombs for members of the royal family to the east of the Great Pyramid. Complicating this plan are intrusive tombs of the 5th and 6th Dynasties, built in between the earlier ones. Some of the western tombs were first built with solid superstructures and an exterior decorated stela, but were later modified with interior chapels. Rock-cut tombs of Khafra's and Menkaura's family members are located farther south, in quarry areas near their pyramids.

Box 6-D The Giza Archives Project

The Harvard University-Boston Museum of Fine Arts (MFA) Expedition at Giza (1905–1947), under the direction of George A. Reisner, was the longest running archaeological project at this major Old Kingdom cemetery. A pioneer of archaeological research in Egypt, Reisner kept meticulous records of his Giza finds, including field notes, photographs, plans and drawings, and this unmatched resource is now available in an online archive (www.gizapyramids.org).

Beginning in 2000, Giza Project director Peter Der Manuelian (now at Harvard University) and his staff digitized more than 37,000 black-and-white excavation photos, as well as more recent ones in color. Almost 4,000 records of Giza tombs and monuments and more than 22,000 artifacts have also been copied. The archive also includes about 10,000 maps and plans from the entire Giza necropolis, a digital library of articles on Giza, and about 4,500 pages of Reisner's unpublished manuscripts. For each Giza tomb there are links to all of Reisner's records, including artifacts found in the tomb and where they are located now. Material from recent MFA fieldwork at Giza, as well as Giza material from other expeditions, museums, and universities around the world have also been included in the Giza Archives.

But the Giza Project is also bringing Reisner's excavations into the 21st century. Additions include zoomable satellite photos of the site and the restoration of tombs and monuments in virtual reality, as they appeared in the third millennium BC (Plate 6.8). The Giza Archives Project is an excellent example of how well-recorded sites in Egypt, even though excavated long ago, can be relevant to the continued work of scholars as well as archaeologists working at the site now.

The finely modeled bust of Prince Ankh-haf (Khafra’s vizier, Plate 6.6) comes from the largest tomb in the cemetery to the east of the Great Pyramid, while the seated statue of Khufu’s corpulent vizier and overseer of works, Hemiunu, is from one of the largest tombs in the western cemetery. In some of the Giza tombs, in the burial chamber or at the bottom of the vertical shaft, Hermann Junker and Reisner found what have been called “reserve heads,” portrait-like limestone heads (without the rest of the body; Figure 6.12). Junker’s explanation for these artifacts is that they were a substitute in case the head of the deceased’s mummy was destroyed. More recently, Roland Tefnin has suggested that they were “magical heads,” which were mutilated in connection with execration rituals. The intentional destruction seen on these heads can possibly be explained by passages in later religious and mortuary texts.

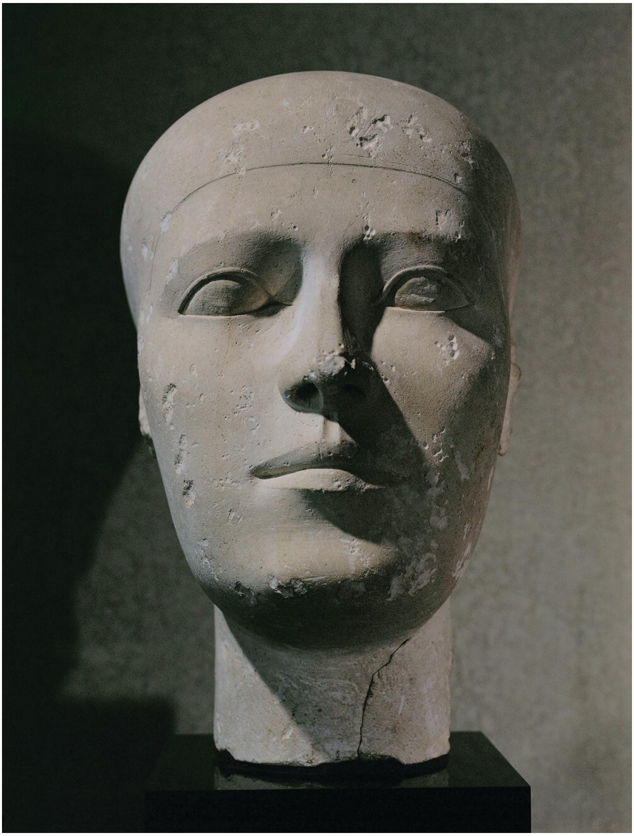


Figure 6.12 “Reserve head” from a mastaba tomb to the west of Khufu’s Giza pyramid.

Source: akg-images/Erich Lessing.

The Giza tomb of Hetepheres I, the wife of Sneferu and the mother of Khufu, was found accidentally by Reisner’s photographer in 1925. Located to the south of the causeway of Khufu’s pyramid, the tomb had no superstructure. The undisturbed burial chamber was at the bottom of a very deep vertical shaft (30 meters) filled with stone, but when opened there was no mummy in the travertine sarcophagus. Reisner thought that Hetepheres’s original burial was elsewhere, possibly at Dahshur near one of her husband’s pyramids, but when it was robbed her son Khufu reburied her tomb goods near his pyramid. It has also been suggested that the queen’s body was robbed before the intended burial in this tomb, or that her true burial was in one of the three queens' pyramids of Khufu's complex, and was subsequently robbed. Another interpretation of this underground chamber is that it was not a tomb, but a ritual deposit of the queen's funerary equipment.

Wood from Hetepheres's furnishings had decayed, but on the chamber's floor were gold inlays and gold foil, which originally covered some of the furnishings. Meticulous care was taken in the chamber's excavation – every fragment was recorded in notes, photographs, and drawings, which enabled the reconstruction of a sedan chair, bed and headrest, two chairs/thrones, and a tent canopy and box containing linen that covered it (sewn with gold rosettes) (Figure 6.13). Silver bracelets of the queen were decorated with butterfly designs of inlaid carnelian, lapis lazuli, and turquoise.

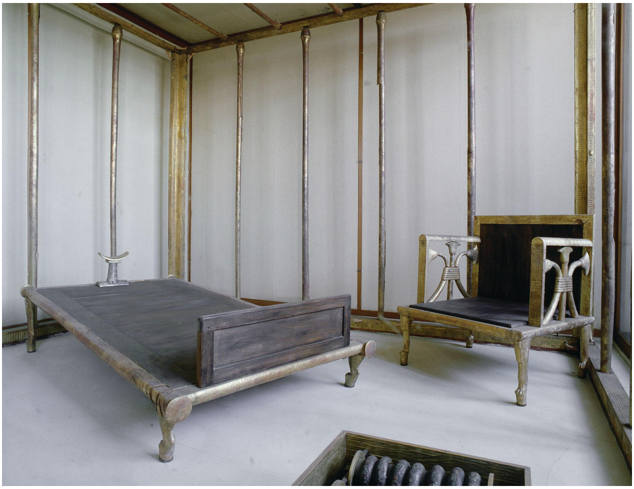


Figure 6.13 Restored furniture found in the Giza tomb or ritual deposit of Queen Hetepheres I, the chief queen of Sneferu and mother of Khufu.

Source: Werner Forman Archive/Egyptian Museum, Cairo.

In another area at Giza, to the west of the royal production complex, Zahi Hawass has been excavating a cemetery with hundreds of tombs belonging to project overseers, artisans, and laborers. Pottery and inscriptions help date the cemetery to the 4th and 5th Dynasties. Tomb superstructures include mud-brick pyramids, domed forms, and mastabas, with the burial in a subterranean shaft. A small group of tombs belonging to higher-status persons is located up a ramp at a higher elevation of the escarpment. Larger than the tombs in the lower part of the cemetery, these tombs are rock-cut or made of mud-brick covered with limestone. Craftsmanship of tomb artifacts is of higher quality than in the lower cemetery, as are the inscriptions carved or painted around the false doors. The most important title found in the upper cemetery is "Director of the King's Work." Tomb inscriptions include curses for tomb robbers, threatening attack from crocodiles and hippopotamuses. Women were also buried in this cemetery, including a priestess of the goddess Hathor, and one female burial was of a pregnant dwarf. Well-preserved, painted statues of tomb owners have been excavated in *serdab* chambers, as well as smaller figurines.

Human remains from this cemetery have been studied by scientists at the Egyptian National Research Center. Age at death for many of the men was 30–35, while a number of women were younger, probably dying in childbirth. The burials were not mummified, indicating their relatively lower status. Most burials were in a contracted position, with head to the north facing east – not fully extended in coffins as in higher status burials. Work-related problems, such as degenerative arthritis and limb fractures – and even amputations – are evident in a number of skeletons.

Box 6-E Belief in burial and the afterlife

Although the symbolism of prehistoric burials in Upper Egypt cannot be specified because written funerary texts are a much later development, some basic beliefs concerning the afterlife are probably symbolized in these burials. In the Naqada culture the body was buried in a grave and was sometimes protected by coverings such as reed mats or animal skins. If not disturbed by grave robbers or scavengers such as jackals or hyenas, unmummified bodies placed in pits in the desert could be remarkably well preserved in the arid environment. For example, at Naqada in 1978 Kathryn Bard excavated the burial of a child that still had brain tissue in the cranium. Some Predynastic burials at Hierakonpolis, with limbs covered in bark (see 5.3), may even represent an effort to preserve the body artificially. The deceased was to be symbolically nourished in the afterlife, and was provided with real food, and probably beer and water in large jars. Bread has been found in some Predynastic burials at Armant, and a bowl with barley seeds was in the Naqada child's burial that Bard excavated. Artifacts that the deceased would have used and enjoyed in life, such as jewelry, hair ornaments, and cosmetic palettes, were also placed in some Predynastic burials.

For those of means, more protection of the body and grave goods was possible with the development of tomb architecture in the Early Dynastic Period. The burial was below ground: the 30-meter shaft cut in the bedrock and filled with masonry leading to Queen Hetepheres I's burial chamber (ritual deposit?) at Giza is evidence of the great efforts taken to protect some burials. In the burial chamber the preserved body was placed in a coffin or sarcophagus. A tomb superstructure called a mastaba covered the burial shaft. This was where offerings were placed by family members and/or priests, first in specially designed niches on the mastaba's exterior, and later in an offering chamber inside the structure.

In the offering chamber was a niched false door, above which were carved mortuary texts of the offering formula (*hetep di nesu*), which was another way to magically provide sustenance for the deceased. Blocked off and not a real door, the false door was the route through which the deceased's *ka* traveled from the subterranean burial to the offering chamber. Also in the mastaba was a small sealed-off room (*serdab*) for the deceased's statue, often with a slit for the statue to look outside. The Opening of the Mouth ceremony enabled the deceased to breathe, eat, and speak in the afterlife, and was performed on the mouth of the deceased's statue by a priest with special tools.

It was believed that there were three elements of a person's existence in the afterlife: the *ba*, *ka*, and *akh*, which have no real equivalents in Judeo-Christian and Muslim beliefs. The *ka* is often translated as "life force"; it was the "personality" of a living person and an aspect of the deceased that required offerings left in the offering chamber. Royal pyramids may also have had a *ka* statue chamber or a small *ka* pyramid. The *ba* is often translated as "soul," but it is perhaps better to think of it as a manifestation of an individual's self after death. Depicted as a human-headed bird from the New Kingdom onward, the *ba* traveled between the tomb and the world of the afterlife. The *akh* is associated with "effectiveness" in life and transfiguration in the afterlife. For the afterlife, the *akh* needed the correct mortuary texts/spells to be rendered effective. It may have a similar meaning to "spirit," with both good and bad results for the living – and an angry *akh* could affect the living adversely. As Mark Lehner has succinctly stated in *The Complete Pyramids*, "the reunion of the *ba* with the *ka* is effected by the burial ritual, creating the final transformation of the deceased as an *akh*."

For the *ba* to exist the body of the deceased had to be preserved, which was the underlying rationale and ideological reason for mummification. Zahi Hawass has found evidence at Saqqara of a 1st-Dynasty official whose bones were covered with resin, and evidence of bodies wrapped in fine linen is also known from this period. Bodies could also be wrapped in linen (including each finger and toe) that was soaked with resin, and molded to appear more lifelike – and less putrefied. By the 4th Dynasty there is evidence of evisceration, which meant that the internal organs were embalmed separately. Although the body of Queen Hetepheres I was missing from her Giza "tomb," her viscera were discovered in a travertine container divided into four compartments, which had been placed in a special sealed recess. The viscera had been preserved in a natron solution, which was still in three of the compartments.

After burial the body was believed to be reunited with its internal organs. Later Old Kingdom mummies were wrapped and modeled in linen that was then painted with facial features and hair. Sometimes even the genitalia and breasts were articulated in linen, and modeling was also done in plaster on the mummy. The brain's true function was unknown and it was usually removed from the cranium: the heart was thought to be the seat of intelligence. True mummification of the entire body, in which the remaining muscles/tissues and bones were packed with natron solution, became technologically advanced in the New Kingdom (see Box 8-C) – but it was very costly.

The Later Old Kingdom

6.9 Sun Temples of the 5th Dynasty

Although there must have been a temple for the sun god at Heliopolis, now a suburb northeast of Cairo, the evidence there from the Old Kingdom is meager: inscribed fragments from shrines of Djoser and Tety, and a broken obelisk with Tety's cartouche. With the 5th Dynasty a new type of cult temple developed to honor Ra – in addition to the symbolism inherent in royal pyramids – demonstrating the increasing importance of this god's cult and theology. From inscriptions it is known that six kings of the 5th Dynasty built sun temples, which in terms of support were closely associated with their pyramid pious foundations. Only two sun temples have been discovered, however – those of Userkaf and Nyuserra at Abu Ghurob, to the northwest of Abusir, where four of the 5th-Dynasty kings built their pyramids. Userkaf, the first king of the 5th Dynasty, built the first sun temple, and Menkauhor's was the last one.

Why the construction of sun temples began in the early 5th Dynasty, and ended abruptly with Menkauhor's temple, is not known. British archaeologist David Jeffreys has drawn sight-lines from the 4th-Dynasty pyramids at Giza to the location of the sun temple (*Iunu*) across the river at Heliopolis. But there was no more room on the Giza plateau to build later pyramids, and the 5th-Dynasty pyramids were built farther south – and out of sight of the *Iunu*. Possibly the 5th-Dynasty royal monuments had a dual focus: sun temples were built within sight of these kings' pyramids, with a direct link between the burial place of the king and the cult center of the sun god.

In some respects the sun temples were similar to pyramid complexes. Nyuserra's sun temple complex has a small valley temple at the edge of cultivation, connected by a causeway to the main temple, which was walled (100 × 76 meters; Figure 6.14). The main monument, however, was not a tomb, but has been reconstructed as a *ben-ben*, a hieroglyphic sign (which looks like a kind of squat obelisk). Both of the surviving sun temples were not well preserved, and this reconstruction is based in part on the form of hieroglyphic signs of the temples' names.

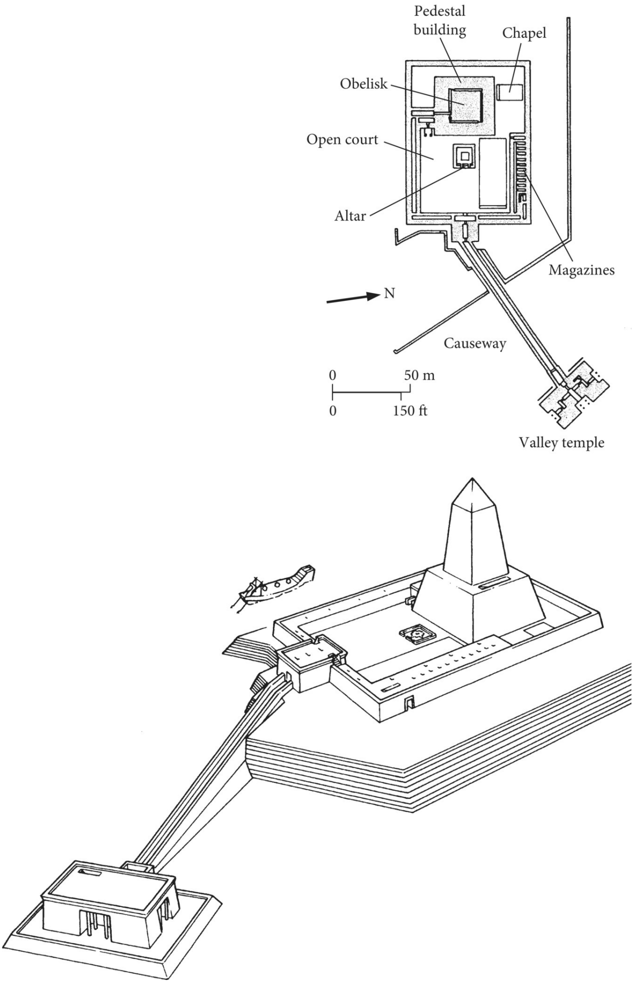

Pedestal building
Chapel
Obelisk
Open court
Altar
Magazines
N
Causeway
0
50 m
0
150 ft
Valley temple

Figure 6.14 Plan of Nyussera’s sun temple complex at Abu Ghurob.

> Source: Drawn by Philip Winton. From Mark Lehner, *The Complete Pyramids*. London and New York: Thames & Hudson, 1997, p. 151.

Nyuserra’s sun temple was excavated in 1898–1901 by German archaeologist Ludwig Borchardt working with Egyptologist Heinrich Schäfer. Parts of the temple complex were first built in mud-brick, and later in stone. Its monument was erected on a high platform of limestone blocks, with steeply inclined sides and granite around the base. Instead of having a temple on the east side of a pyramid, Nyussera's sun temple has a large open court, with an open-air altar of five travertine slabs on the east side. Borchardt thought that channels and basins on the north side of the walled temple were for cattle slaughtering, but no other equipment associated with such activity was found there. Miroslav Verner, a Czech archaeologist who has worked for many years at Abusir, suggests that this area was for purification ceremonies using liquids. To the south of the monument was a small chapel and the "Room of the Seasons," decorated with beautifully carved low reliefs depicting scenes from two seasons, including harvesting.

To the south of the temple wall was a large model of a boat (ca. 30 × 10 meters) in mud-brick. A village, probably for temple personnel and administration, was located outside the walls of the sun temple; it has not been excavated.

6.10 Later Old Kingdom Pyramids and the Pyramid Texts

After Menkaura's pyramid, Giza was no longer the site of pyramid construction. Probably the most important factor in choosing a pyramid site was a substantial bedrock base, and later pyramids were located to the south of Giza. But David Jeffreys has also suggested that most of the Old Kingdom pyramids, from Giza to Dahshur, were located for greatest visibility from the center of the capital at Memphis (and related to this, that pyramid size decreases with proximity to Memphis).

Userkaf, the first king of the 5th Dynasty, built his pyramid near Djoser's Step Pyramid complex at Saqqara. Stripped of its casing stones, Userkaf's pyramid now looks like a huge heap of stone and rubble. With a base line of 73.3 meters and ca. 49 meters high, Userkaf's pyramid is even smaller than Menkaura's – the smallest pyramid at Giza. Later Old Kingdom pyramids were not only less solidly constructed than those at Giza, but were also of a smaller size, which became standardized: 150 cubits in length and 100 cubits high. (The cubit was a measure of length, about 52.5 centimeters long.)

Excavations conducted at Userkaf's pyramid complex by Egyptian archaeologists later in the 20th century uncovered a mortuary temple built to the south of the pyramid, and a small offering chamber on the pyramid's east side. The temple contained many fragments of fine, low relief.

After Userkaf, four kings and one queen (Khentkawes, the wife of Neferirkara) built pyramids to the north of Saqqara at Abusir, not far from Userkaf's sun temple. The first of the Abusir pyramid complexes, which was built by Sahura, was excavated 1902–1908 by Ludwig Borchardt. With a base line of 78.75 meters and ca. 47 meters high, its pyramid is similar in size to that of Userkaf's. Sahura's large mortuary temple consists of a long entrance hall, columned court, behind which were many storerooms, five statue niches, and an offering chamber. Later mortuary temples would emulate this plan. In the temple's offering chamber, which was carved with a false door, was an offering basin with a copper drain.

A greatly expanded program of relief sculpture is found throughout Sahura's pyramid complex – possibly as much as 10,000 square meters, not including the reliefs in the 235-meter-long causeway. At the entrance to the valley temple were reliefs of Sahura trampling his enemies, and inside the temple were scenes of the king hunting, fowling, and fishing, and dispatching Egypt's enemies. One of the first scenes of seafaring ships is also carved on an inner temple wall.

From Abusir come some remarkable records, the Abusir Papyri. In fragments, one set of papyri associated with Neferirkara's Abusir pyramid was found by villagers in 1893. Other Abusir papyri, excavated much later by Czech archaeologists, come from the temples of King Raneferef and Queen Khentkawes. The hieratic papyri from Neferirkara's temple, which were recorded in a later reign, contain inventories of temple contents, and records of ceremony schedules, from daily offerings to festivals. They provide information about temple priests and personnel and their rotating schedules, as well as elaborate daily accounts of provisions, from the pyramid's agricultural estates and other royal institutions. These papyri thus provide a rare glimpse into the complex economic relationships and administration of an Old Kingdom royal mortuary cult – and the sophistication of ancient Egyptian bureaucracy.

The Abusir Papyri (and related temple inscriptions) are also informative about state economic organization in the later Old Kingdom, as clearly demonstrated in the recent studies of Hana Vymazalová. (Named) royal estates were established by kings to support their sun temples and pyramid cults, including the cult activities practiced at these temples, special festivals, and all the temple personnel involved. There was definitely a close connection between the 5th Dynasty sun temples and royal funerary temples, both ideologically and economically. But the production of the royal estates that supported these cults went first to the state, i.e., the royal residence of the ruling king in this strongly centralized government, and was then redistributed to the sun temple and the royal mortuary cult. Production areas for bread, beer, and animal slaughtering – the offerings used in temple rites – were also associated with the sun temples and towns of the royal funerary cults.

Another remarkable body of texts, known as the Pyramid Texts, first appears in the Saqqara pyramid of Unas, the last king of the 5th Dynasty, whose monument is to the south of Djoser's complex. Hieroglyphs of Pyramid Texts are carved in the pyramid's antechamber and burial chamber, which was also decorated with carved designs of reed mats and tent poles – and a star-covered ceiling. Although many of these texts are much older than the late 5th Dynasty (the oldest surviving ones are from Sahura's temple, and written mortuary texts could possibly go back to the early Old Kingdom), they do not appear in pyramids until Unas's reign (Plate 6.7). Unas's Pyramid Texts contain 283 separate "spells," and more than 800 spells are known altogether, from this pyramid and those of the 6th Dynasty. Of several different types, the spells were essentially for the king's burial and protection, and transformation in the afterlife.

The kings of the 6th Dynasty also built their pyramids at Saqqara, in the north (Tety), and south (Pepy I, Merenra, and Pepy II). Pepy II's pyramid (Figure 6.15), near the late 4th-Dynasty tomb of King Shepseskaf, was excavated after World War I by Swiss archaeologist Gustave Jéquier. Like all of the Old Kingdom pyramids, this one had been robbed, with only a basalt sarcophagus and sunken canopic chest (for the separately mummified viscera) still in place in the burial chamber.

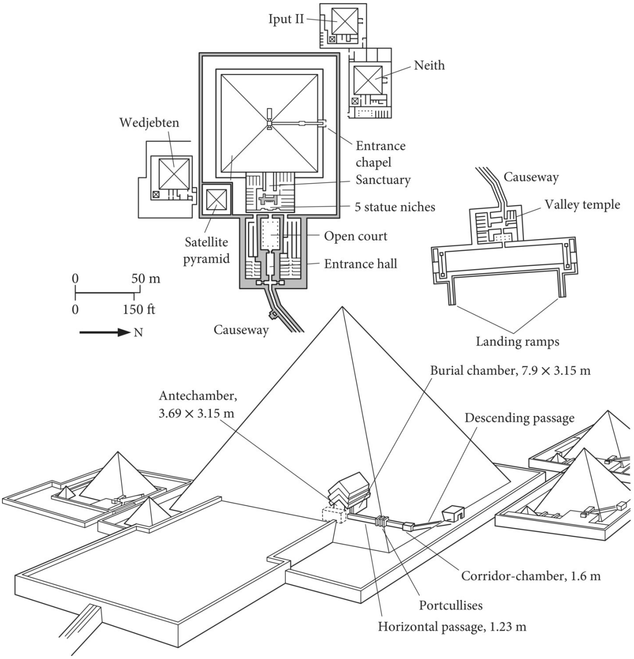

Iput II
Neith
Wedjebten
Entrance
chapel
Sanctuary
5 statue niches
Open court
Entrance hall
Satellite
pyramid
0
50 m
0
150 ft
N
Causeway
Causeway
Valley temple
Landing ramps
Burial chamber, 7.9 × 3.15 m
Antechamber,
3.69 × 3.15 m
Descending passage
Corridor-chamber, 1.6 m
Portcullises
Horizontal passage, 1.23 m

Figure 6.15 Plan of Pepy II’s pyramid complex at Saqqara.

Source: Drawn by Philip Winton. From Mark Lehner, *The Complete Pyramids*. London and New York: Thames & Hudson, 1997, p. 161.

Like most of the 5th- and 6th-Dynasty pyramids, the core of Pepy II’s pyramid consists of (five) steps with retaining walls. According to Mark Lehner, the core was made in the manner of pyramid construction ramps, with irregular stones set in local clay (*tafla*) and mud. The core had then been encased in blocks of Tura limestone, and a huge “girdle” of stone was added later.

Three walled queens’ pyramids lie outside the pyramid’s enclosure walls. Pyramid Texts are found carved inside the queens’ pyramids (as well as in the king’s pyramid). In a secondary enclosure outside of Queen Wedjebten’s pyramid were symbolic houses and offering chambers of a family of priests who shared indirectly, through the queen, in the endowment of Pepy II’s mortuary cult.

To the east of Pepy II’s pyramid was an elaborate mortuary temple, and at the end of the causeway were a small valley temple, platform, and ramps, which probably led to a harbor or canals. The temples and causeway were all decorated with reliefs. The two components of the mortuary temple (an entrance, columned court, and storerooms; and a sanctuary, statue niches, and storerooms) are longer than the base line of the pyramid – which is probably indicative of the temple's relative importance in the complex's program and ritual.

6.11 An Expanding Bureaucracy: Private Tombs in the 5th and 6th Dynasties

After the 4th Dynasty the state was run by an increasing number of bureaucrats, who built an increasing number of tombs, which were decorated and furnished by a proliferating group of highly skilled artisans centered around the Memphis court. As families of officials and priests continued in their offices, the bureaucracy kept on expanding (although evidence of this – titles inscribed in tombs – was probably inflated). Naguib Kanawati (Macquarie University) has argued that eventually, in the late 5th and 6th Dynasties, fewer resources may have been available for tombs of lower- and then middle-status officials.

Later Old Kingdom private tombs are found throughout Egypt, but the highest status Memphite tombs, for members of the royal family and high officials, were usually located near each king's pyramid. Tombs of high officials had multi-roomed mastabas covered with reliefs. Some tombs had many statues, including painted ones of the tomb owner or a husband and wife pair, sometimes with their much smaller children, in the closed *serdab*. Many of the tomb reliefs are scenes of "daily life," including farming and craft activities. Scenes of offering-bearers with quantities of food and drink were in addition to real food, small models of food, and model servants performing food preparation activities in the tomb. Most tomb goods, especially jewelry and inlaid furnishings, were usually robbed, but they were often depicted in scenes.

In reliefs the tomb owner is usually shown in a larger scale than anyone else, symbolic of his relative importance. Above the false door of the tomb chapel was a carved relief of the tomb owner seated before an offering table, with the offering formula text (*hetep di nesu*) on the lintel. Titles and names of the tomb owner were carved around the false door, to identify the tomb owner's status in the afterlife, and sometimes there were longer biographical inscriptions.

Some large family mastabas at Saqqara of the late Old Kingdom have multiple *serdab*s and burial shafts for the different family members – and up to 40 rooms decorated with reliefs. To the north of Djoser's Step Pyramid are a number of well-preserved tombs, including that of a high 5th-Dynasty official named Ti, excavated by Auguste Mariette in 1855. Ti was married to a royal princess, and among his titles was "Overseer of the Sun Temples" at Abusir. The largest interior space in Ti's mastaba is a columned court, in the center of which is the entrance to the subterranean passage to the burial chamber. Scenes in fine low relief decorate the walls of the mastaba's interior rooms (Figure 6.16). In one scene Ti and his wife, who has her own offering niche in the tomb, are entertained by singers and musicians playing the flute and harp. Reliefs of animals, both domesticated and wild, contain very life-like details, including geese being fattened by force-feeding, and a cow, assisted by a farmer, giving birth to a calf. In a scene of Ti in a papyrus marsh, two foxes look for birds' eggs. Craft scenes include those of ship-builders, carpenters making furniture, and women weaving linen.

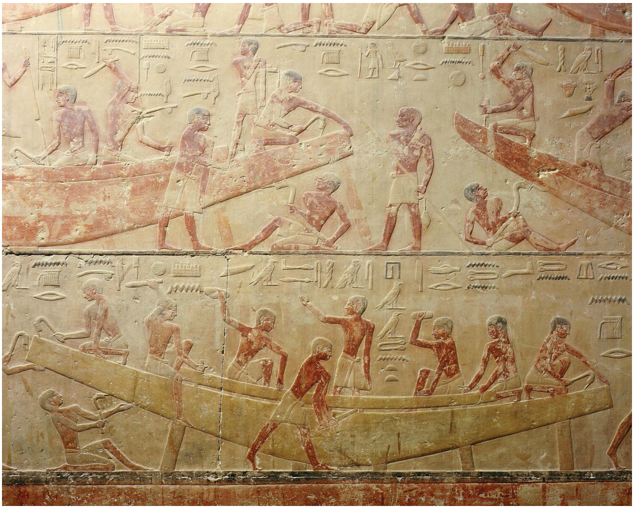


Figure 6.16 Painted relief with scenes of boat construction from the 5th-Dynasty tomb of Ti, Saqqara.

Source: The Art Archive/Alamy.

The Saqqara tomb of Mereruka, who was the son-in-law of King Tety (6th Dynasty), was discovered by Jacques de Morgan in 1893. Near Tety's pyramid, the mastaba of this tomb contains 33 rooms and corridors, some of which were for Mereruka's wife, Hertwatet-khet, and his son, Mery-tety. Reliefs in the tomb include an animated desert scene with long-legged *tjesem* hounds (similar to greyhounds) hunting wild cattle, hares, and a lion, and Mereruka hunting in a papyrus marsh filled with birds, fish, and a hippopotamus (Figure 6.17). High-status Egyptians hunted for sport, and clearly wished to continue such activities in the afterlife. Some very curious scenes in this tomb also suggest attempted domestication of wild animals, including tethered gazelles and a hyena being force-fed. Such experiments, which are also known from other tombs, were not successful, however.

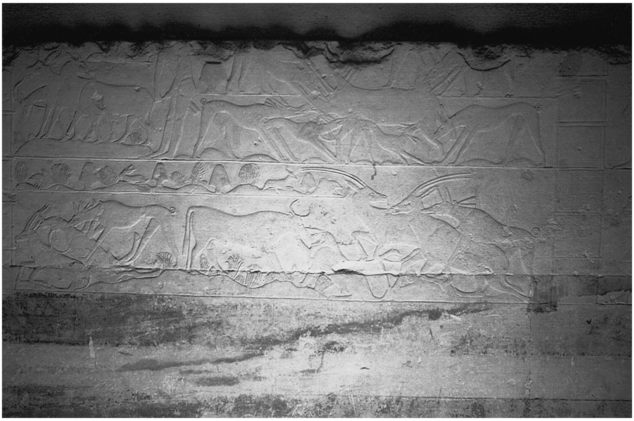


Figure 6.17 Relief scene of hunting in the desert, from the 6th-Dynasty tomb of Mereruka, Saqqara.

By the mid-5th Dynasty provincial administrators/governors (nomarchs) began to be buried in their provinces, not in Memphis, and later in the dynasty a new office appeared, that of governor/overseer of Upper Egypt. The provincial administrators were paid by the crown in the form of local land where farmers/workers lived, and food and goods were produced. In the 6th Dynasty, these offices became inherited positions, along with the associated land, and governors also began to hold important priestly titles. Thus administrative and economic control of the central government waned in the provinces (mainly in Upper Egypt) – and the increasing power of these provincial governors is reflected in their tombs.

In the Middle Cemetery at North Abydos Janet Richards (University of Michigan) has excavated the large mastaba tomb of Weni the Elder, whose long biographical inscription was found by Auguste Mariette in 1860. Weni the Elder's career as an official spanned the reigns of the first three kings of the 6th Dynasty, and his biographical text provides important information about the increasing power of this provincial center in the late Old Kingdom – and the erosion of central power. The context of this inscription was unknown until Richards located the tomb. Her excavations have also revealed the monumental context of Weni's burial: a mastaba ca. 30 × 30 meters, to the northeast of which is a chapel where new reliefs and inscriptions have been found. Subsequently, Richards has also excavated the large mastaba tomb of Weni's father, the Vizier Iuu. These two monumental mastabas are located within a large field of many smaller ones.

Although mastaba tombs were built in Upper Egypt, many of the larger tombs of nomarchs from the late 5th Dynasty onward were carved into the cliffs beyond the floodplain to either side of the Nile. Façades of these tombs were cut to resemble a mastaba, with interior rock-cut rooms. Offering chambers were carved with false doors and often had rock-cut pillars and statues in niches. The burial chamber was also rock-cut, at the bottom of a shaft or ramp. In larger tombs there could also be additional rooms, including storerooms and *serdab*s. Decoration of the tomb was in relief scenes similar in themes to those of "daily life" found in Memphite tombs.

Rock-cut tombs at Aswan dating to the 6th Dynasty were carved in three rows on a sandstone cliff to the north of Elephantine Island, and mastaba tombs have been discovered to the east, closer to the river. Some of the more elaborate rock-cut tombs had an exterior courtyard and causeway leading to the valley. Biographical inscriptions in some of these tombs are especially informative about Egyptian relations with Nubia at this time. One of the Aswan governors, Harkhuf, who was also “Keeper to the Door of the South,” left inscriptions in his tomb about his four overland expeditions (by donkey caravan) to the land of Yam, probably in Upper Nubia. Serving under King Merenra and then Pepy II, Harkhuf returned to Egypt with the products of Punt, such as elephant ivory, incense, and ebony. He also recruited Nubian guards/soldiers, and in the last expedition he recorded bringing back a dwarf, to the great delight of the king.

Provincial cemeteries in the Old Kingdom were not only for high-status elites. At Naga el-Deir, across the river from Bet Khallaf and Reqaqna (see 6.2), George Reisner excavated a number of cemeteries from 1901 to 1904. Tombs of the Old Kingdom were found at 12 locations. The earlier Old Kingdom tombs were mastabas of mud-brick or stone plastered with mud, over burial pits or shafts leading to a roughly cut subterranean chamber(s). The later Old Kingdom tombs in Cemeteries 100–400 were rock-cut, and some also had a rock-cut chapel. The lowest status Old Kingdom burials were simple pit graves. David O’Connor has interpreted the large impressive 3rd-Dynasty tombs at Bet Khallaf and Reqaqna as being the burials of royal officials, while the local elite were buried in tombs on the east bank at Naga el-Deir – a pattern which continued in the 4th and 5th Dynasties. Lower-status individuals were also buried at Naga el-Deir in simple graves. To O’Connor these burials suggest a four-tiered social structure in the Thinite region in the early Old Kingdom and at least three tiers later.

In the Faiyum region at Medinet Gurob, British archaeologists Guy Brunton and Reginald Engelbach excavated an Old Kingdom cemetery in 1920. Of the 156 individuals buried there, traces of coffins were found for only seven. Most of the burials were contracted and placed in “shapeless” graves in the loose sand. Brunton and Engelbach remarked about the general poverty of these burials – and even pots were “almost absent.” While the Gurob Old Kingdom burials have been interpreted as low-status ones, they demonstrate the importance of burial ritual for these individuals.

6.12 Egypt Abroad

Outside the Nile Valley, expeditions were sent by kings of the Old Kingdom to obtain goods and materials, for which there is much inscriptional evidence. Beginning with Djoser's reign, there are Old Kingdom rock inscriptions in southern Sinai, in the mining area of the Wadi Maghara, and evidence of an Old Kingdom settlement and industrial area for smelting copper. This settlement was not continuously occupied, but expeditions were sent there by kings of the different dynasties for turquoise and copper. Some of these expeditions reached the Sinai by boat from a harbor on the Gulf of Suez at Ayn Soukhna, which has been excavated by the French Institute of Archaeology, Cairo. Ayn Soukna experienced a peak of activity in the 5th Dynasty, and later in the Middle Kingdom (12th Dynasty).

One hundred kilometers to the south of Ayn Soukhna, a French team co-directed by Pierre Tallet and Elsayed Mahfouz has recently found evidence of a harbor at Wadi el-Jarf, near the site of St. Paul's monastery. Archaeological evidence there includes the remains of camps and surveillance installations, a large underwater quay construction, and in Zone 1, 25–30 long rock-cut galleries used for storage. These galleries are 16–34 meters long and are similar to the ones found at Mersa/Wadi Gawasis (see Box 7-A). The ceramic evidence at Wadi el-Jarf dates to the 4th Dynasty, and the well-preserved inscriptions demonstrate that the harbor was used mainly during the reign of Khufu.

Seafaring expeditions were probably more complicated than overland ones, requiring, in addition to organizational skills, the know-how and materials to build large ships, and navigating and sailing skills. Sneferu sent a large fleet of ships to obtain cedar (probably to the Lebanon), as recorded on the Palermo Stone. Reliefs along the 5th-Dynasty pyramid causeway of Sahura depict another seafaring expedition – to Punt. The cedar boat timbers buried in pits next to Khufu's pyramid are evidence of such expeditions.

In the Eastern and Western Deserts there are numerous rock inscriptions of Old Kingdom quarrying expeditions. Kings of the 4th and 5th Dynasties sent expeditions to Wadi Hammamat, to obtain greywacke for statues, and there are inscriptions of Khufu and Radjedef, as well as 5th-Dynasty kings, at a gneiss quarry in the Nubian Western Desert northwest of Abu Simbel, where stone for Khafra's seated statue was quarried. Expeditions continued into the late 6th Dynasty, as rock inscriptions of Pepy II in the Eastern Desert and south Sinai attest.

Dakhla Oasis in the Western Desert was connected to major trade routes along desert tracks – east and north to the Nile Valley through Kharga Oasis, and south to Sudan. From the 4th Dynasty there is evidence that Khufu and Djedefra both sent expeditions to the west of Dakhla, and at the eastern end of the oasis at Ayn Asil an administrative center for the Governor of the Oasis was established. This settlement, which was first discovered by Akhmed Fakhry, has been excavated by the French Institute of Archaeology, Cairo, since 1977. Covering an area of ca. 40 hectares, remains of the settlement, which dates to the late Old Kingdom with occupation continuing in the First Intermediate Period, include a well-fortified enclosure. The large governor's palace (reign of Pepy II), 225 × 95 meters in area, consists of apartments and an administrative district surrounded by storerooms and work rooms, as well as a large bakery. Funerary chapels for the oasis governors were also associated with the palace. Outside the town walls were pottery workshops with 24 kilns. About 800 meters to the west of the settlement is a cemetery at Qila el-Dabba with four mud-brick mastaba structures, the tombs of the 6th Dynasty governors. Surrounded by smaller tombs of three different types, probably symbolic of different statuses, these mastabas date to the reigns of Pepy I and Pepy II. At an oasis in the middle of the Western Desert, the site of Ayn Asil was an Egyptian colony – Egyptian in its material culture, town planning, bureaucratic organization and mortuary cult.

Nubia held special interest for the Egyptians, which is indirectly reflected in the development of Egypt's border town at Elephantine. Large fortification walls of the 2nd Dynasty were maintained throughout the Old Kingdom. Excavations of the German Archaeological Institute uncovered a 3rd-Dynasty administrative complex with a small step pyramid, but it later fell into disuse when the area was used for craft production, and then for a cemetery. The local goddess Satet also had an important cult center, which in the Old Kingdom was repeatedly rebuilt in mud-brick.

In the early 4th Dynasty Sneferu sent a military expedition to Nubia that, according to the Palermo Stone, returned with 7,000 captives and 200,000 cattle. Who these captives were and where they were from in Nubia cannot be specified. As a result of Egyptian military penetration in Lower Nubia in the 1st Dynasty, the A-Group had disappeared, however, and Sneferu's expedition probably raided Upper Nubia. At Buhen North, near the Second Cataract, evidence of a fortified town built in the 4th Dynasty was excavated in the 1960s by the Egypt Exploration Society. Buhen was probably a major trading center with regions to the south, and seals of 4th- and 5th-Dynasty kings have been found there. But Egyptian control of Lower Nubia ceased by the 6th Dynasty, when indigenous peoples, whom George Reisner called the C-Group, began to be buried there.

The origins of the C-Group are unknown. (Reisner had originally placed what he called the "B-Group" in Nubia between the fourth millennium BC A-Group and the C-Group, but this culture is no longer considered valid.) Potsherds with similarities to a C-Group ware have been found at locations in the Western Desert as far south as the Wadi Howar (northern Sudan) – possible evidence for cultural antecedents to the C-Group. They may have been related to semi-nomadic groups who lived in Upper Nubia (and were related to the A-Group). A-Group peoples may also have moved farther up the Nile and into the hilly regions to the east of the river. Then when Egyptian presence in Lower Nubia ended in the late Old Kingdom, an opportunity opened up for semi-nomadic peoples to settle in this part of the Nile Valley.

Egyptian expeditions to Punt are known from 5th-Dynasty texts. Although Egypt withdrew from Lower Nubia before the 6th Dynasty, the crown was still very interested in the exotic raw materials that came through Nubia to Egypt. Nubian places/regions that the Egyptian expeditions visited are mentioned in Harkhuf's tomb inscriptions and other texts, but their locations are debatable. There would be no indigenous writing system in Nubia until the late first millennium BC (the Meroitic language, which is imperfectly understood), so historical information about much of Nubian history is only found in Egyptian texts, most of which were written from a biased perspective.

According to David O'Connor's analysis of the late Old Kingdom textual evidence, Wawat was in Lower Nubia, where the earliest C-Group people were living. Irtjet and Setju were located in Upper Nubia, where a powerful polity would arise at Kerma by ca. 2000 BC that would later become a great threat to Egypt's control of Lower Nubia. Yam may have been still farther south, to the west of Punt. Harkhuf's records of dealings with the leaders of these regions suggest that there were chiefs controlling parts of Wawat, Irtjet, and Setju. A powerful and probably wealthy ruler with control of trade held forth in Yam.

The First Intermediate Period

6.13 The End of the Old Kingdom and the First Intermediate Period: Causes of State Collapse

Collapse of the Old Kingdom polity occurred following the reign of Pepy II. Essentially what followed in the so-called First Intermediate Period was political fragmentation, with the formation of much smaller polities whose power bases were in provincial Egypt, and much competition and aggression between these polities. The First Intermediate Period, however, was not a time of collapse of ancient Egyptian civilization, which continued in renewed forms for more than two thousand years.

A number of reasons for the collapse of the Old Kingdom state have been offered by scholars. These basically fall into two categories: (1) environmental stress and (2) socio-political pathologies.

The major environmental stress cited for the First Intermediate Period is lower Nile floods. The Neolithic wet-phase, in which moister conditions than today prevailed episodically in Egypt, was finished by the beginning of pharaonic times. But a more arid environment than in Predynastic times did not hamper the accumulation of huge agricultural surpluses that supported the Old Kingdom state and its monument building. Texts relating to the First Intermediate Period studied by Barbara Bell, an astronomer at Harvard University, cite low Nile floods (among other problems).

Although texts she used are not First Intermediate Period in date and their historical accuracy may be questionable, short-term fluctuation of Nile levels is a real possibility.

According to Karl Butzer's more recent examination of the evidence of Nile floods, there were relatively low floods after 2900 BC, with a brief minimum ca. 2200 BC, and exceptionally high floods ca. 2150–1900 BC. Low Nile floods would have meant less land under cultivation – and lower crop yields. Butzer has calculated that the population of Egypt almost doubled between 3000 and 2500 BC (from 0.87 to 1.6 million). With such a large population in the later Old Kingdom and problems in agricultural yields, famine for some may have been the result. Possibly the state could have responded to environmental problems of low Nile floods with technological intervention, such as sponsoring irrigation works, but this did not happen.

An environmentally deterministic explanation for the collapse of the Old Kingdom is not sufficient by itself, however. The period of the lowest Nile floods was relatively brief, but socio-political problems were clearly developing in the later Old Kingdom. As more land went out of state ownership to support pious foundations (pyramid cults, temples, and mortuary cults of individuals), direct income of the crown and state ownership of land decreased. Royal decrees which exempted a number of pious foundations from taxation also increased the problem of state income. The political decentralization that developed in Upper Egyptian provinces in the 6th Dynasty, with increasing control of local resources, was followed by the political fragmentation of the First Intermediate Period. Lastly, the long(?) reign of Pepy II may have led to a certain amount of political corruption and uncertainty about who would succeed him, which would have contributed to undermining the central authority of the state.

After Pepy II's death, the 6th Dynasty ended with the rule of a queen, Nitiqret. Manetho lists "70 kings in 70 days" for the 7th Dynasty, and this unreal number probably symbolizes the political confusion of the times. For a period of about 20 years an uncertain number of "kings" (of the 7th and 8th Dynasties) may have tried to hang on to the vestiges of kingship at Memphis, but there seems to have been a breakdown of centralized control. One small monument may have been constructed by a king of the 8th

Dynasty, Ibi, near Pepy II's pyramid at Saqqara. Discovered by Gustave Jéquier in 1929, Ibi's pyramid has a base line of only 31.5 meters – about the size of one of the queens' pyramids in Pepy II's complex. Its rubble core consists of small stones and mud. A small mud-brick chapel was found on the pyramid's east side, and the burial chamber contained a huge granite block for the sarcophagus.

Another monument from the First Intermediate Period is a mud-brick pyramid or mastaba at Kom Dara in Middle Egypt, first excavated by Ahmed Kamal in the early 20th century. The base line of this square monument (with rounded corners) is 130 meters – much bigger than Pepy II's pyramid. An entrance on the north side led to a sloping passage and subterranean tomb, lined with limestone slabs probably robbed from other tombs. A cartouche of a King Khuy was found in a nearby tomb, but this name is not known from other inscriptions. Thus the builder of this monument remains uncertain as does his power base, but not his grandiose aspirations.

Rulers of the 9th and 10th Dynasties eventually emerged at Herakleopolis (to the south of the Faiyum region). They controlled parts of northern and Middle Egypt, but in the Theban area and farther south there was the growing power base of local rulers (the 11th Dynasty), whose descendant Mentuhotep II eventually reunified Egypt. Herakleopolis may have been located at Ihnasya el-Medina. Although this site has mainly been investigated for monumental remains of the New Kingdom and later, the Spanish expedition there (National Archaeological Museuem, Madrid) has excavated tomb complexes of the First Intermediate Period and early Middle Kingdom, some with paintings and reliefs on the walls of stone chambers, as well as architectural remains from a temple of this period.

The First Intermediate Period was a time of intense rivalry and alliance-making of various local rulers in the Upper Egyptian provinces, including Ankhtifi at Mo'alla, who controlled Nomes 2 and 3 (Edfu and Hierakonpolis). The biographical inscription in Ankhtifi's tomb provides information about this period of conflict. After gaining control of the Edfu nome, Ankhtifi took his small army northward where he threatened the Theban nome, but for unknown reasons he did not add Thebes to his sphere of control. Ankhtifi boasts of giving food to the hungry and clothing to the poor – claims that are also found in inscriptions of other local rulers of the period (as well as the late Old Kingdom). Such claims may in part have been standard rhetoric for rulers' tomb biographies or stelae, but they may also reflect real economic crises – of food shortages from low crop yields, looting, and/or disruption of farming activities.

Rulers such as Ankhtifi had some form of local political legitimacy, raised their own small armies (which in some cases included Nubian mercenaries), and controlled the economic resources of their districts. As a result, the local population owed their allegiance to him, and his political position was legitimized by his priestly position (overseer of priests) in the local cult of the god Hemen. What is missing is the concept of kingship that had developed since late Predynastic times – demonstrating a major change in ideology, at least in the southern provinces of Upper Egypt.

A large number of funerary stelae, of men of middle and even lower status, are also known from the First Intermediate Period. These stelae were carved with the offering formula, figure of the tomb owner and often family members, and sometimes a short biography. The style of these funerary stelae – often with crude, elongated figures carved in sunken relief – is indicative of their provincial origins, and they lack the refinement attained by sculptors in Old Kingdom Memphis (Figure 6.18).

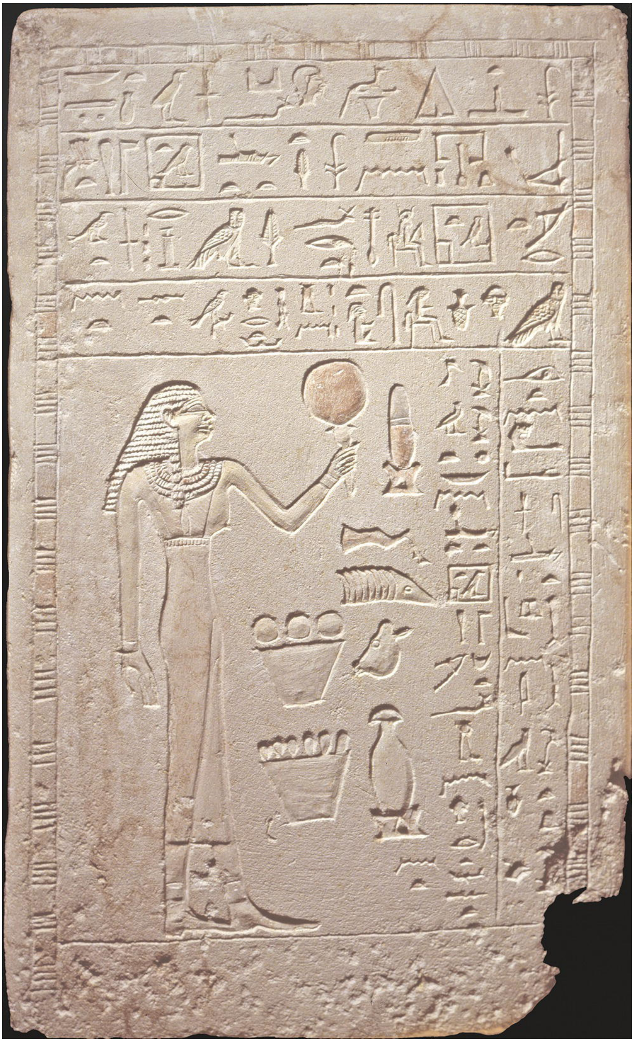


Figure 6.18 Funerary stela of a priestess of Hathor, Setnet-Inheret, dating to the First Intermediate Period, from Naga el-Deir.

Source: Copyright © Phoebe A. Hearst Museum of Anthropology and the Regents of the University of California. Catalogue No. 6-19881.

A great number of First Intermediate Period burials, of what might be termed middle and lower status, have been excavated in the many provincial cemeteries in Upper Egypt. Valuable artifacts in many of these burials, such as carved stone cosmetic containers and jewelry made from imported stone beads, seem to contradict the concept that this was an impoverished period throughout all of Egypt. Such artifacts probably reached a wider number of people than during the highly stratified Old Kingdom, when the rewards of royal expeditions were dispensed by the crown, and the highest-quality craftsmanship was found in Memphis.

German archaeologist Stephan Seidlmayer has shown that during the First Intermediate Period new types of non-functional artifacts were made for burials. In particular, crude wooden models of offering-bearers and workshops, and painted cartonnage mummy masks (made of linen covered with gypsum plaster), became popular in lower-status burials. In a different medium, these creations emulated the scenes depicted in earlier Memphite tombs. Thus, there was increasing demand for craftsmen's work in the provinces, as well as people there who could produce such goods.

Literature about the First Intermediate Period, written later, paints a bleak picture, in part to justify the re-imposition of centralized control by kings of the Middle Kingdom. Undoubtedly there were political conflicts and disruption – and possibly impoverished times for many. But during the First Intermediate Period provincial rulers and an increasing number of other members of society seem to have benefited from a lack of centralization, as evidenced in their burials. At Tell Edfu there is even evidence that the town almost doubled in size in the First Intermediate Period, as demonstrated by Nadine Moeller's (University of Chicago) excavation of town walls.

A lack of royal monuments points to a lack of royal control of resources. But whereas petty polities like those of the First Intermediate Period were the norm in most of the Near East throughout the Bronze Age, a different concept of political power had developed in Egypt for almost one thousand years. As in the late Predynastic Period, a power base eventually emerged in the south, this time at Thebes, which would unify the country under a centralized kingship, initiating the Middle Kingdom.

Chapter 7
The Middle Kingdom and Second Intermediate Period

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Introduction

After divided control among provincial rulers and rival kings during the First Intermediate Period, Egypt was reunified by warfare in the 21st century BC, by an 11th-Dynasty king, Mentuhotep II, whose power base was at Thebes. During the Old Kingdom Thebes had been a minor provincial center, but in the 11th and 12th Dynasties Thebes/Karnak became an important cult center for a local deity, Amen. The 12th-Dynasty capital was located in the Faiyum region, where the kings built their pyramids. A highly organized bureaucratic state developed and state works included huge mud-brick forts near the Second Cataract in Lower Nubia. Evidence of domestic architecture comes from a planned state workmen's town at Kahun, near the site of Senusret II's pyramid. Information about Middle Kingdom culture is immensely enriched by the first works of Egyptian literature, written in Middle Egyptian.

In the Middle Kingdom Egypt was increasingly threatened by foreign forces. The Kerma kingdom, which was located in Upper Nubia, posed a potential problem for Egyptian control of Lower Nubia, hence the construction of large forts there. In the north peoples of Asiatic origin began to move into the Delta. Asiatic rulers known as the Hyksos eventually controlled much of northern Egypt during the Second Intermediate Period.

The Middle Kingdom

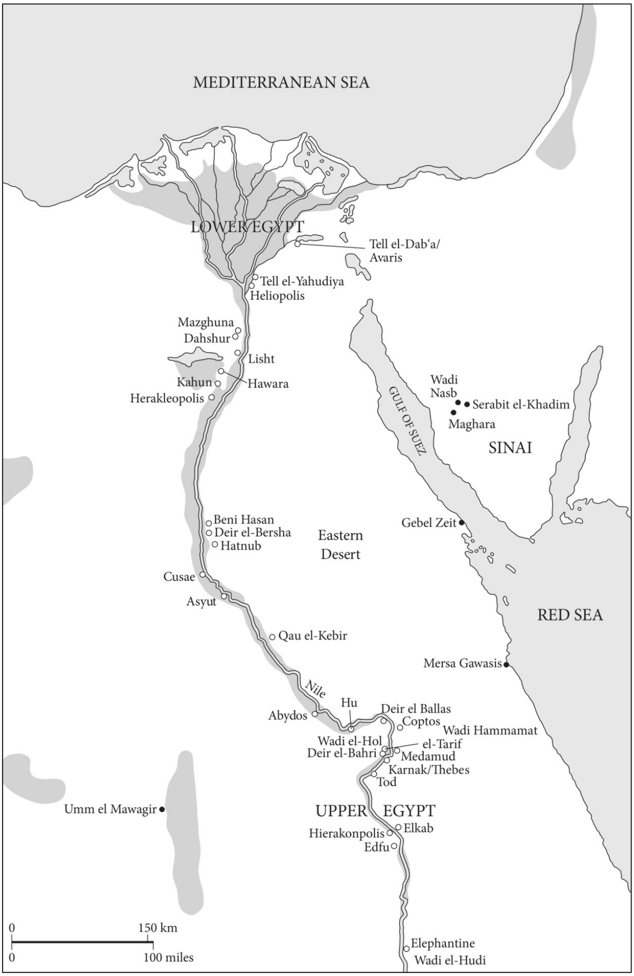
7.1 The Middle Kingdom: Overview

A text known as *The Prophecy of Neferti*, written in the Middle Kingdom but surviving from much later copies, describes the bleak state of affairs in Egypt during the First Intermediate Period, including political upheaval, famine, and social unrest. Other pessimistic works written about this period but composed in later times are also known. How extensive and intensive such social pathologies actually were cannot be determined – and they may have been greatly exaggerated in the literature. Written from the perspective of a reunified and internally secure state, these texts describe a period when there was no centralized rule. With a known model of Egyptian kingship from a unified state for much of the third millennium BC, local rulers of the First Intermediate Period competed to maintain and extend their control, which inevitably caused social upheavals. But the country was not unified under the control of a centralized kingship until the rise of a dynasty of rulers at Thebes, known as the 11th Dynasty. With Upper Egypt controlled by Thebes, King Mentuhotep II expanded his control northward, with warfare in Middle Egypt and a final conflict with the Herakleopolitan kingdom. Egyptian military activity also extended into Lower Nubia. Historical memory and the earlier ideology of kingship were important factors in legitimizing the rule of the Theban dynasty over the entire country, but individual agency was also important in this process, through leadership and warfare.

Mentuhotep II's predecessors at Thebes had left large rock-cut tombs in the Theban hills at el-Tarif, but Mentuhotep II created a much more impressive funerary monument at Deir el-Bahri, next to which Queen Hatshepsut of the 18th Dynasty would later build her renowned mortuary temple – inspired by the design of the earlier temple. Bearing little resemblance to an Old Kingdom pyramid complex, Mentuhotep II's mortuary complex was built with a central terraced building to the west of which were two courts and a long descending passage cut in the bedrock leading to the burial chamber.

The 12th-Dynasty kings, however, built pyramid complexes for their tombs to the east of the Faiyum region and near the new capital of Itj-tawy-Amenemhat, the remains of which have not been located. The re-established centralized kingship is emphasized in the name of the capital, which means "Amenemhat [I] is the one who seizes/takes the Two Lands." Constructed primarily of mud-brick, the 12th-Dynasty pyramids were not as substantially built as the 4th Dynasty ones at Giza, but they nonetheless reasserted the symbolism of royal power. A large planned town associated with Senusret II's pyramid and the pyramid's pious foundation has been excavated at Kahun, a well-preserved settlement from which administrative papyri have also been obtained.

As in the Old Kingdom, the state was supported by taxation, and exemptions existed for pious foundations and temples. Corvée labor was used for state projects. The military was also conscripted; it protected Egypt’s northeastern border in the Delta and its forts in Nubia, and conducted large-scale expeditions outside the Nile Valley (for mining, quarrying, and foreign trade).


MEDITERRANEAN SEA
LOWER EGYPT
Tell el-Dab‘a/
Avaris
Tell el-Yahudiya
Heliopolis
Mazghuna
Dahshur
Lisht
Kahun
Hawara
Herakleopolis
Wadi
Nasb
Serabit el-Khadim
Maghara
GULF OF SUEZ
SINAI
Gebel Zeit
Beni Hasan
Deir el-Bersha
Hatnub
Eastern
Desert
Cusae
Asyut
RED SEA
Qau el-Kebir
Mersa Gawasis
Nile
Hu
Abydos
Deir el Ballas
Coptos
Wadi Hammamat
Wadi el-Hol
el-Tarif
Deir el-Bahri
Medamud
Karnak/Thebes
Tod
UPPER EGYPT
Umm el Mawagir
Elkab
Hierakonpolis
Edfu
0
150 km
0
100 miles
Elephantine
Wadi el-Hudi

Map 7.1 Sites in Egypt, Sinai, and the Eastern Desert during the Middle Kingdom and Second Intermediate Period.

The re-established Egyptian kingship created a more centralized government, which was structured on a similar model to that of the Old Kingdom, and headed by the vizier. Egyptian society remained highly stratified according to socio-political status. The centralized state was thus regenerated, and old identities, especially of Egyptian kingship, were re-created, but under new circumstances. Some local rulers, who had previously been politically autonomous in the First Intermediate Period, were retained in post-conquest times as state officials were established at the provincial level. In the early 12th Dynasty state bureaucrats were located in administrative centers throughout the country, each group headed by a mayor. Nomarchs ("great overlords") were appointed by the king; some of these positions became hereditary, while others were discontinued. Nomarchs in Middle Egypt continued to build large tombs, such as at Beni Hasan and Qau el-Kebir, which represent some independence of authority and control of resources. But large provincial tombs of these lords disappeared during the reign of Senusret III, which seems to signify their diminished role in the provinces. Local control of the nomarchs was eventually replaced by that of town mayors with reduced authority as the central government played a larger role.

Political instability of the early 12th Dynasty is suggested by an assassination attempt on Amenemhat I, known from an instructional text (which is fictional) addressed to his son. The subsequent establishment of a co-regency system to stabilize the transition of rule, in which the crown prince ruled for a time with his father, is debated, however. Amenemhat I, who was not of royal blood, may have been the vizier of Mentuhotep IV. As vizier, Amenemhat led an expedition to the Wadi Hammamat greywacke quarries, in the desert to the east of the Nile in Middle Egypt. Two miraculous events were recorded on this expedition: a gazelle gave birth on what was to become the stone cover of the king's sarcophagus, and a large well was revealed in the desert as the result of an unusual rainstorm.

Under Senusret III, a major reorganization of the government occurred, with two main departments (*waret*) established to administer southern and northern Egypt, with textual evidence of more in the late Middle Kingdom. Another new department was the "Office of the Provider of People," which registered people and organized labor for state projects. Other new bureaus were also created, resulting in a hierarchy of new officials and new titles – and an increased number of bureaucrats (or possibly a wider distribution of officials, which provides more information about lower level administration).

A major irrigation project took place in the Faiyum region, probably in the late 12th Dynasty. A dyke was constructed to direct water of the Nile channel now known as the Bahr Yusef, which begins in Middle Egypt and drains into Lake Moeris, into excavated canals south of the lake. This greatly increased the area of land under cultivation in the Faiyum region, thus increasing crop yields – and indirectly, state income. Karl Butzer has discussed phases of very high Nile floods (Cycle D) during the Middle Kingdom, and the Faiyum irrigation project would have benefited from these.

As in the Old Kingdom, the crown controlled foreign trade, for which there is much evidence, both archaeological and textual. Sherds of pots from Cyprus and Minoan Crete have been excavated at several Middle Kingdom sites. Byblos, where a number of Middle Kingdom artifacts have been found, was a major trading partner, and silver, cedar, oil, and other commodities were imported from (or through) Syria-Palestine. In 1894 Jacques de Morgan found the remains of five or six boats of imported cedar planks at Senusret III's Dahshur pyramid. Originally 9–10 meters in length, the boats may have been used for the royal funeral.

Because of control of the Middle Nile by the Kerma kingdom, some expeditions in the Middle Kingdom were sent to Punt by ship along the Red Sea. Seafaring ships were made at Coptos in Upper Egypt. The boats were disassembled and then the parts were carried across the Eastern Desert to the harbor at Mersa/Wadi Gawasis. Such expeditions were major undertakings, perhaps requiring several thousand men, as stated in inscriptions (Box 7-A).

Box 7-A Mersa/Wadi Gawasis, an Egyptian port on the Red Sea

In the Middle Kingdom, seafaring expeditions were sent to obtain the exotic raw materials of Punt, probably located in what is now the Kassala region in eastern Sudan and the southern coastal region of the Red Sea. Fraught with danger, the sea route was taken to circumvent the river/overland route to Punt because of Kerma control of the Middle Nile.

In the 1970s Abdel Monem Sayed (University of Alexandria) identified the remains of a Middle Kingdom harbor, known anciently as Saww, at Mersa/Wadi Gawasis on the Red Sea, about 23 kilometers south of the modern port of Safaga. He found 12th-Dynasty inscriptions there from a shrine of an official of Senusret I named Ankhu, and an inscribed stela of the king's vizier Intef-iker (Antefoker). The latter text describes ships that were built in Coptos for an expedition to "Bia-Punt" with over 3,700 men. The ships must have been disassembled for transport through wadi routes in the Eastern Desert, and then reassembled at the Red Sea harbor.

Re-investigation of the site by Rodolfo Fattovich (University of Naples "l'Orientale") and Kathryn Bard began in 2001. Unlike in Lower Nubia, where the Egyptians built huge mud-brick forts, there was no planned fort at Saww, and the archaeological evidence there suggests temporary camp sites. In December 2004 after over 3 meters of sand were removed along the slope of the western coral terrace, the entrances to two man-made caves were uncovered.

Outside the larger cave (Cave 2) were small carved niches, some of which still contained limestone stelae. The best preserved stela, which had fallen out of its niche, was found face down in the sand. Carved on this stela was the cartouche of the 12th-Dynasty king Amenemhat III, above an offering scene to the god Min. The hieroglyphic text below this scene is about two expeditions led by officials named Nebsu and Amenhotep, to Punt and Bia-Punt (the "mine of Punt"), the location of which is unknown (Plate 7.1).

Inside the entrance to this cave and on top of a large deposit of windblown sand were two blades of a steering oar, about 2 meters in length. Pottery dating to the early 18th Dynasty was associated with the oar pieces, and they may have been used on a ship of Queen Hatshepsut's famous expedition to Punt, which is described in reliefs in her temple at Deir el-Bahri (see 8.2).

Further excavation of Cave 2 in 2005–2006 revealed four other long, man-made caves (Caves 3–6) that were cut parallel in the coral terrace. These five cave galleries were used as a kind of ship arsenal, and at the rear of Cave 5 (about 19 meters long) an estimated 26 coils of ship rope – neatly coiled and placed in two layers on the cave floor – were found as the sailors left them almost 4,000 years ago (Plate 7.2). Two more man-made caves have subsequently been located.

Outside of the caves whole ship timbers – planks and decking – of cedar, imported from Lebanon, were excavated by nautical archaeologist Cheryl Ward. Some of the timbers had the original mortise-and-tenon joints, and copper fastenings still in place. The well-preserved remains of more than 40 wooden cargo boxes were also found outside Cave 6. These boxes had been covered with gypsum plaster, and on two boxes a painted hieroglyphic inscription included the cartouche of a king (Amenemhat IV), Year 8 of his reign, and a description of the contents: "the wonderful things of Punt."

Investigations by coastal geologists Duncan FitzGerald and Christopher Hein (Boston University, Department of Earth Sciences) demonstrate that the ancient harbor extended considerably farther inland than where the present-day shoreline is located. Four thousand years ago the eight man-made caves were located just above the northern edge of the ancient harbor, which was sheltered from the Red Sea by a narrow opening to the east and from the prevailing northern winds by the fossil coral terrace.

Thus at Wadi Gawasis there is significant evidence of a major pharaonic harbor, including ship timbers and rigging, stone anchors, and boxes that were used to carry imported materials to Egypt. Texts on stelae left at the harbor describe the royal expeditions, and obsidian, ebony and pottery from the southern Red Sea region identified at the site demonstrate the distant contacts of this trade.

State mining and quarrying expeditions in the Middle Kingdom were also impressive. Amethyst for jewelry was mined at Wadi el-Hudi, about 35 kilometers east of Aswan, where a fort and settlement have been found with inscriptions and rock drawings. Mines for galena (lead ore), used for eye paint, were located at Gebel Zeit near the Gulf of Suez. One mining site at Gebel Zeit was also the location of a miners' settlement and a sanctuary within a natural cave.

At Wadi Maghara in the Sinai, where copper was mined in the Old Kingdom, inscriptions of Middle Kingdom date have also been recorded. The most extensive operations in the Sinai during the Middle Kingdom, however, were at Serabit el-Khadim, where turquoise was mined, with copper mines located about 6 kilometers to the west at Wadi Nasb. Numerous Middle and New Kingdom inscriptions there indicate that expeditions from Egypt were sent both by ship and overland by donkey.

Because of its access to raw materials from southern regions and the gold mines of the Nubian Eastern Desert, Lower Nubia was the most important region for Egypt to control. The large mud-brick forts in the Second Cataract region represent royal/state projects on a huge scale in the Middle Kingdom. These forts not only had to be built, but also manned by soldiers and administrators, and supplied from Egypt with food that was shipped upriver. Texts known as the Semna Dispatches are informative about the functioning of these forts, which eventually numbered 17. During the reign of Senusret III more forts were built at the southern end of the Second Cataract after military campaigns there, expanding Egypt's control in the region.

By Middle Kingdom times a large powerful state, the second oldest known state in Africa, had arisen on the Middle Nile, with its capital at Kerma. This polity was a potential threat to Egypt and the 12th-Dynasty forts were built to protect Egyptian trade and communications through the Second Cataract region, and defend – or at least demonstrate – Egypt's territorial boundary. The forts also controlled the movements of local peoples in Lower Nubia: the C-Group and desert nomads known as the *Medjay*.

Another potential threat to Egypt in the Middle Kingdom were Asiatic groups to the northeast. Fortifications called the "Walls of the Ruler" (not known archaeologically) were built in the northeastern Delta in the early 12th Dynasty. Although it is no longer thought that the kingdom of Asiatic rulers (the Hyksos), which controlled northern Egypt during the Second Intermediate Period, was the result of a large-scale military invasion, peoples from Palestine began to filter into Egypt during the Middle Kingdom. Asiatic names are found in a number of Middle Kingdom texts, suggesting their presence in Egypt in the 12th Dynasty, especially in the Faiyum region, which was a major center of development. They probably entered Egypt by various means: as nomadic pastoralists in parts of the eastern Delta, and possibly as workers seeking to escape famines. Asiatic traders came to Egypt in caravans – such as is represented in the well-known scene from Khnumhotep II's Beni Hasan tomb – and prisoners of war were taken in Egyptian military campaigns or raids abroad (known from royal and non-royal inscriptions). As long as Egypt's kings controlled the entire country, however, these Asiatic foreigners were not an internal threat.

But the Egyptians began to lose control of the eastern Delta in the 13th Dynasty, when there is evidence at Tell el-Dab'a and other sites of increasing numbers of Asiatics, and Egyptian mining in the Sinai came to an end. Lower Nubia was still controlled by the Egyptians and Itj-tawy continued to be the capital, but there is no evidence of the impressive building programs of the 12th Dynasty – of large temples and forts. Only a few small pyramids of 13th-Dynasty kings are known. These kings had short reigns – 60 kings in 153 years, according to Manetho – not enough time to build large monuments. Subsequently, Hyksos kings ruled in the eastern Delta, with Egyptian kings in Thebes. The later Greek term "Hyksos" is derived from the Egyptian word for these Asiatics, *Heqa-khasut*, which means "ruler of foreign/hill countries."

The Middle Kingdom was also a time of ideological change – or evolution of beliefs, with the increasing importance in mortuary beliefs of the god Osiris as the resurrected king in the realm of the dead. At Osiris's cult center at Abydos private individuals left their commemorative stelae and memorial chapels. In the Coffin Texts, which were inscribed on Middle Kingdom coffins – with some dating to the First Intermediate Period – the god Osiris is mentioned more frequently than in the earlier Pyramid Texts. The beautifully painted outer coffin of Djehuty-nakht from his tomb at Deir el-Bersha, now in the Museum of Fine Arts, Boston, is a prime example of these texts. Whereas the late Old Kingdom mortuary texts were found in a royal context (with one or two exceptions), the Coffin Texts were for private individuals. New spells appeared in the Coffin Texts, but many were taken from the Pyramid Texts, and scholars now see the Pyramid and Coffin Texts as an evolving complex body of texts. The Coffin Texts have been interpreted as a "democratization" of afterlife beliefs, but this is a simplistic explanation of Egyptian mortuary beliefs and practices which evolved through time, and John Baines suggests that the spread of such texts to the non-royal elite was only a slight dissemination down the social hierarchy.

Abydos became an important pilgrimage site in the early 12th Dynasty, when a number of stelae were left there by officials of Senusret I. This king also began major construction at Karnak, which was to become the most important cult center in Egypt for the god Amen. At Karnak Senusret I built a huge court, as well as a small shrine to commemorate his *sed*-festival. A large temple was probably also built at Heliopolis, where only the king's obelisk is now seen. Although little remains of them, other monuments were also erected by Senusret I from Elephantine to the Delta, reasserting the authority of the crown.

Cultural achievements of the Middle Kingdom include works of literature and other narrative texts, written in Middle Egyptian (Box 7-B). In later Egyptian traditions the Middle Kingdom and its texts were seen as classical. A school was founded at the capital in the early 12th Dynasty, and some texts, such as the *Instruction of Amenemhat I* (with royal advice for his son), may have been copied by schoolboys. Another set of instructions, that of Khety, is about a father who takes his son to study at the capital school. Urging his son to apply himself, Khety sings the praises of the educated scribe, who does not have to wear the heavy garments of laborers or work all night long – and can take baths. A more profoundly pessimistic work of "wisdom" literature is a text called *The Dispute between a Man Tired of Life and His Soul (Ba).* The setting is an argument between a desperate man who feels the hopelessness of life, and his *ba*, who talks him out of suicide.

Box 7-B Middle Egyptian literature

Narrative works of literature are among the wide-ranging cultural achievements of the Middle Kingdom. The literary corpus also includes instructions, discourses, and laments. Written in Middle Egyptian, these works are available in several English translations. Two notable examples of narrative works are described here, following the translations in William Kelly Simpson's *The Literature of Ancient Egypt.*

Perhaps the best known work, the *Story of Sinuhe*, is about an official of Amenemhat I's daughter, who overhears news of the king's death. Sinuhe flees Egypt in fear and spends many years in Palestine – providing an interesting description of the Middle Bronze Age culture there. He becomes a military officer of the chief of Upper Retenu and fights a local strongman, whom he kills with arrows and an ax. In his old age, Sinuhe receives a summons home and is then able to return to Egypt. Meeting the king in the palace, he is received almost like a wild man, who is then cleaned up and given fine clothes. Sinuhe is also given an estate, and a tomb and tomb furnishings so that he can have a proper Egyptian burial.

The *Tale of the Shipwrecked Sailor* is a story within a story. It begins with a leader worrying about his unsuccessful expedition to southern regions. He is consoled by another who tells him of a seafaring expedition with 120 sailors in which everyone was killed but one. The survivor ended up on the Island of the *Ka*, which was the home of a huge snake – 30 cubits long with markings of lapis lazuli. The snake is a sympathetic character who tells of his own losses, of 75 serpent siblings and offspring who were killed by a falling star. Prophesying that the sailor will return to Egypt, the snake gives the sailor all of the exotic products of Punt (including myrrh, giraffe tails, elephant tusks, hound dogs, and baboons) when he is picked up by an Egyptian ship.

Although not a work of literature, the *Heka-nakht Letters/ Papers* provided material for a 20th-century AD work of literature by Agatha Christie, *Death Comes as the End* – her only murder mystery set in ancient Egypt. Dating probably from the early 12th Dynasty, the letters are those of a farmer and funerary priest written to his sons, who are overseeing an agricultural estate for him in southern Egypt while he is away on business in the capital.

7.2 Pre-Unification 11th Dynasty: *Saff* Tombs at Thebes

According to later king lists, there was an ancestral figure of the 11th-Dynasty Theban rulers named Mentuhotep I. Intef I, who was the first of the Theban rulers to use a royal titulary, and the two succeeding king Intefs, left large rock-cut tombs in western Thebes at el-Tarif. Known as *saff* tombs, which is usually translated as "row," the tombs of the three Intefs are the result of tomb development in Upper Egypt during the First Intermediate Period. Designed with a long courtyard excavated in the gravel and scree of the el-Tarif slope, the tombs faced the floodplain. At the back of the court were rows of columns, a tomb chapel with a shaft leading to the burial, and a row of subsidiary tombs. Built for Intef I, the Saff Dawaba is the largest of these tombs, with a court ca. 300 meters long.

In control of southern Egypt, Intef II led the first campaign northward, capturing Abydos and then moving in Middle Egypt against the Herakleopolitans. A column from a monument of Intef II's at Karnak is the oldest evidence that can be dated to an 11th-

Dynasty king there. German excavations at Elephantine have also revealed his two shrines for the deities Satet and Khnum.

7.3 Mentuhotep II's Complex at Deir el-Bahri

Nothing is known about how Mentuhotep II defeated the last Herakleopolitan ruler and reunified Egypt under his kingship. Ruling for ca. 51 years, Mentuhotep II constructed a much larger tomb complex than those of his royal predecessors at Deir el-Bahri (Figure 7.1), about 3 kilometers west of Intef III's tomb. His tomb was excavated in the early 20th century by Édouard Naville, for the Egypt Exploration Fund, and in the 1920s by Herbert Winlock of the Metropolitan Museum of Art. Later investigations (1966–1971) of the German Archaeological Institute, Cairo, were conducted by Dieter Arnold, who determined that the complex had been built in four stages.

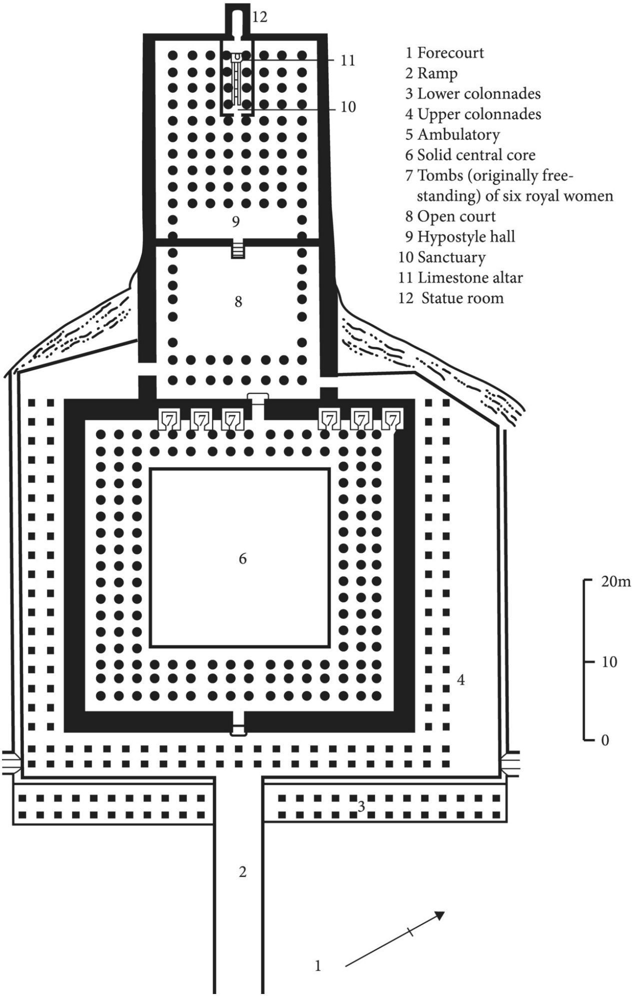

12
11
10
1 Forecourt
2 Ramp
3 Lower colonnades
4 Upper colonnades
5 Ambulatory
6 Solid central core
7 Tombs (originally free-standing) of six royal women
8 Open court
9 Hypostyle hall
10 Sanctuary
11 Limestone altar
12 Statue room
9
8
7
6
4
3
2
1
20m
10
0

Figure 7.1 Plan of Mentuhotep II’s tomb complex at Deir el-Bahri.

Source: Gay Robins, *The Art of Ancient Egypt*. London: British Museum Press, 1997, p. 93, Figure 91.

From the valley (temple?) a walled causeway, almost a kilometer long, led to the temple’s large walled forecourt. At the west end of the forecourt was a ramp, with columns to either side, leading to the columned terrace of an upper structure. Behind the columns was a walled ambulatory with three rows of columns, which surrounded a central building. Fragments of reliefs that decorated the walls of the ambulatory include scenes of a battle, papyrus marsh, and hunting in the desert, with cult scenes on the inner walls. Earlier chapels and tombs for six young females were incorporated into the ambulatory's west wall. Four of the chapels were inscribed with the title "royal wife," but the youngest burial was of a child named Mayet, about 5–6 years old. The princesses were buried in sarcophagi with finely carved scenes in sunken relief. The sarcophagus of Kawit includes a hair-dressing scene of the princess drinking from a cup and holding a mirror.

Although little remained of it, the central structure of Mentuhotep II's monument was a solid mass of stone, which Winlock reconstructed with a pyramid on top. Arnold does not believe that this structure could have supported the weight of a pyramid, however, and he has reconstructed it as a flat square structure, ca. 22.2 × 22.2 meters. To the west of the central building were a small court with columns at the east end and a new type of hall (hypostyle) with 80 columns. At the end of the hypostyle was a rock-cut niche for the king's statue, with carved false doors to the north and south. The entrance to the tomb of Mentuhotep's chief wife Tem was also located in the hypostyle hall.

Mentuhotep's underground tomb was entered via a 150-meter descending passage beginning in the court west of the central building. The passage was partially lined with sandstone blocks, in which there were niches with small human figurines from wooden models (see 7.4). At the end was the burial chamber with a granite vault and walls. The king's coffin had been placed in a travertine shrine covered by a large granite slab, around which were slabs of black diorite.

In the center of the temple forecourt an unusual structure called the Bab el-Hosan was found in 1896 by Howard Carter. It consists of an open pit lined with mud-brick, with a long subterranean passage leading to an unfinished chamber beneath the temple. Arnold thinks that this was the original tomb, which became a cenotaph in a later phase of construction. In this chamber Carter found a seated statue of Mentuhotep II, wearing the *sed*-festival robe and Red Crown of Lower Egypt, wrapped in layers of linen (Plate 7.3). Although reliefs depict Mentuhotep with brown skin, this statue is painted black, possibly symbolic of the god Osiris. Twelve statues of the king (as Osiris?) that originally stood along the processional way were found decapitated and buried. In the temple forecourt there were also many tree pits (ca. 10 meters deep and filled with soil) that would have needed daily watering.

Although some elements of Mentuhotep II's mortuary complex were derived from the earlier rock-cut *saff* tombs, the terraced central structure with its ambulatory is a very impressive and innovative monument. Combining elements of a Theban style with some Memphite influence, Mentuhotep II's complex marks the re-emergence of a large-scale royal mortuary monument – the ultimate symbol of power in the Old Kingdom.

7.4 Model Workers and the Deir el-Bahri Tomb of Meketra

In the later Old Kingdom models of workers performing tasks such as grinding grain, baking, and brewing were placed in private tombs. These models were first made of limestone as single figures, and later mostly of wood, often in groups such as offering-bearers. In style the figures are simply carved without the details and inscriptions of the statues of tomb owners found in their *serdab*s.

In the First Intermediate Period wooden models in provincial tombs became greatly elaborated, such as the model soldiers from the tomb of Mesehti at Asyut. In this model four columns of soldiers carry spears and shields symbolizing local aspirations of power. The most remarkable group of wooden models comes from an early 12th-Dynasty tomb at Deir el-Bahri, of Meketra (Figure 7.2). On a much smaller scale than that of Mentuhotep II's, Meketra's tomb was also approached by a long ramp. At the top of the ramp was a portico with nine columns, behind which were two rock-cut passages. Although the tomb had been investigated previously (in 1895 and 1902), a small chamber covered by stone debris had been overlooked, and 24 well-preserved wooden models were found there in 1920 by Herbert Winlock and Ambrose Lansing.

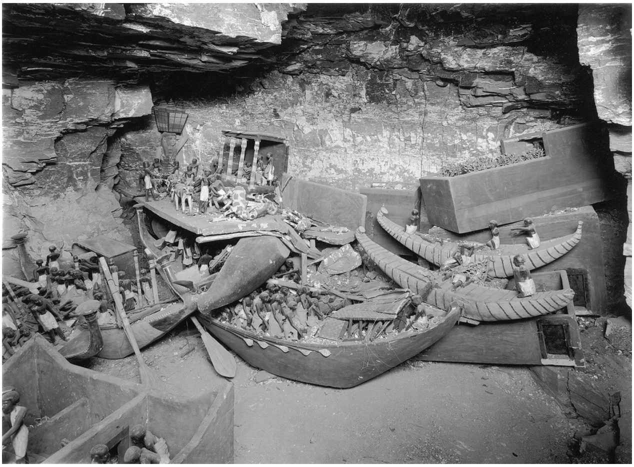


Figure 7.2 View into the small chamber of Meketra's 12th-Dynasty tomb at Deir el-Bahri where the wooden models were found.

Source: Photography by the Egyptian Expedition, The Metropolitan Museum of Art. Image © The Metropolitan Museum of Art.

Half of Meketra's models are of boats, the largest of which have sails for going upstream or rowers for downstream travel. A small model of two papyrus boats is equipped with a fishing net in which there are model fish. Models of craft activities include weaving and carpentry, with miniature carpenters' tools. The model of a house and garden, with fruit trees planted around a rectangular pool, provides design details of an elite estate. Models of cattle include a barn and butchering activities, and one portrays a cattle count, with record-keeping scribes seated beneath a columned porch.

Other models of "daily life" are of baking and brewing activities, and granaries where the cereal was stored. Although these models were made for ideological reasons – for burial in Meketra's tomb – they are informative about boat technology, and craft and domestic activities of the period. They are also significant as models of an ideal life and environment. The three models that depict events related to the funeral, including two large painted statues of female offering-bearers, may be ritual artifacts, or have different symbolic meaning than those of activities on an elite estate.

A remarkable set of wooden models from a tomb at Deir el-Bersha have recently been exhibited in the Museum of Fine Arts, Boston (MFA). The tomb of Djhuty-nakht (Tomb 10A) was excavated in 1915 by Clarence Fisher (working for George Reisner). Hundreds of wooden fragments of these models were sent to Boston, where they were stored in the museum's basement, and beginning in the late 1990s these fragments were restored by a conservator and then exhibited in 2009–2010 – almost a century after they were found. The models include ones similar to those found in Meketra's tomb, such as ones of "daily life" activities on the nomarch's estate. But most remarkable are the huge number of model boats (58), including boats for transport and cooking, as well as funerary and pilgrimage boats.

7.5 12th-Dynasty Temples

After reunification, Mentuhotep II supported the construction of a number of temples, mainly in Upper Egypt, which was made possible by his long reign. Kings of the 12th Dynasty continued to construct cult temples, and although most of these temples were removed in the New Kingdom or later, elements of the earlier temples have been found.

An example of the many phases of temple rebuilding can be seen in the temple of the god Montu at Medamud, about 5 kilometers northeast of Karnak. The temple was excavated by the French Archaeological Institute, Cairo, first under the direction of Fernand Bisson de la Roque (1925–1932), and until 1939 by Clément Robichon and Alexandre Varille. Buildings of the last temple were constructed throughout the Ptolemaic Period, and several Roman emperors had reliefs carved on temple walls. Beneath the Greco-Roman structure, a New Kingdom temple had been built, probably during the reign of Thutmose III, whose name was on an artifact intentionally buried in a ritual deposit next to the temple's foundation platform.

The best-preserved part of the Middle Kingdom mud-brick temple complex at Medamud consisted of rows of priests' houses and storerooms, and part of a rectangular mud-brick enclosure wall (5.5 meters thick!). This temple is an example of what Barry

Kemp calls “Early Formal” architecture (Figure 7.3). Some stone architectural elements were built into the mud-brick temple walls, however, including an inscribed gate and several doors reused in the later foundation platform. Other Middle Kingdom blocks were reused in the threshold of the Greco-Roman temple. Cartouches on the reused blocks are those of Senusret III and several 13th-Dynasty kings, including Sobekhotep III, who usurped the works of earlier kings by having his name carved in their cartouches. A granite gateway from Senusret III’s reign was still standing in the Greco-Roman structure.

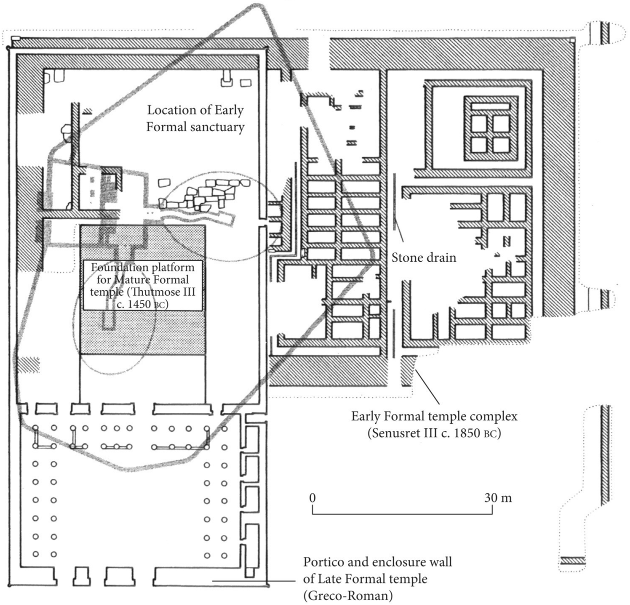

Location of Early Formal sanctuary
Foundation platform for Mature Formal temple (Thutmose III c. 1450 BC)
Stone drain
Early Formal temple complex (Senusret III c. 1850 BC)
0
30 m
Portico and enclosure wall of Late Formal temple (Greco-Roman)

Figure 7.3 Plans of the Montu temple at Medamud, dating from the Old Kingdom to the Greco-Roman Period.

Source: B. J. Kemp, *Ancient Egypt: Anatomy of a Civilization*. London: Routledge, 1989, Figure 22. Copyright © 1989, Routledge. Reproduced by permission of Taylor and Francis Books UK.

To make the archaeology even more complex, beneath the Middle Kingdom temple was a First Intermediate Period one, dated by its ceramics. Although there are problems with the interpretation of this evidence, which was incompletely published, this temple seems to have consisted of two oval mounds (20 × 15 meters) in each of which was a small chamber entered by a serpentine passage from a court. The court was blocked off by a gateway (possibly a pylon, known mainly from temples of the New Kingdom and later), and the whole complex was surrounded by a polygonal enclosure wall. This design is unlike that of all later Egyptian temples, and Kemp believes that it is the best example of what he terms “Preformal” Egyptian temple architecture.

Thus at Medamud the same sacred site was in use for over 2,000 years, with much disassembling and reuse of earlier material, some of which had been usurped by later kings, and decoration of Roman emperors on earlier Ptolemaic walls. Sorting out all of the different phases of architecture and decoration makes the excavation and study of Egyptian temples a very complex task.

Under the Middle Kingdom kings a considerable amount of temple building took place in the Theban region. Another Early Formal style temple, also for the cult of the god Montu, was built at Tod, about 20 kilometers south of Luxor. Work on the Middle Kingdom temple began under Mentuhotep II and Mentuhotep III, with the main part built in the early 12th Dynasty. In 1936 Bisson de la Roque found the Tod Treasure under the floor of this temple. The treasure consisted of four bronze boxes inscribed with Amenemhat II’s name. Inside were many rich artifacts in gold, silver, and lapis lazuli, including imported vessels from the Aegean and cylinder seals from Ur (3rd Dynasty), in southern Mesopotamia.

Possibly the most elegant cult building known from the Middle Kingdom is a shrine of Senusret I that was disassembled and reused in the 18th Dynasty as fill in the third pylon of the Temple of Karnak. The small limestone shrine, which was built for the king’s *sed*-festival, was reassembled at Karnak in the mid-20th century (Plate 7.4). Consisting of 16 pillars erected on an elevated base, the shrine had ramps on two sides. In the center was a pedestal for the bark of the god Amen when it was carried by priests along a ceremonial route. The beautiful raised relief of the detailed hieroglyphic inscriptions and figures that are carved on this shrine represents the renewal of court-centered traditions of elite art – and royal patronage of the highly skilled artists who decorated such monuments.

With the increasing importance of the cult of Osiris, Abydos became an important pilgrimage site in the Middle Kingdom. At the sector of Abydos known as the Kom el-Sultan, about 2 kilometers northeast of the Early Dynastic royal tombs, are the remains of a mainly mud-brick temple of Osiris and, before the Middle Kingdom, a necropolis god named Khentiamentiu, which means "Foremost of the Westerners" (ruler of the dead). Excavated artifacts and inscribed evidence from the temple, which dates from the Early Dynastic Period onward, include the names of kings of the Old, Middle, and New Kingdoms. A large temple was built there in the early 12th Dynasty, and during the Middle Kingdom the great festival of Osiris was celebrated along the route from the temple to the Early Dynastic tombs, one of which was believed to be that of Osiris (see 5.6).

Also at North Abydos are a number of royal *ka*-chapels, excavated by Flinders Petrie. Four of these probably date to the Old Kingdom; later chapels in the Middle and New Kingdoms were superimposed on these earlier ones. The Abydos *ka*-chapels were miniature temples, separate from the royal tomb and not a place of burial, which could be several hundred kilometers away. They were serviced by *ka*-priests and endowed with a pious foundation to support the offerings and cult of the dead king's *ka*.

In the early 19th century, many stelae of private individuals from non-royal memorial chapels (without tombs) at Abydos were obtained by antiquities dealers, and hundreds were later excavated by Auguste Mariette. More recently, the context of such stelae has been revealed by David O'Connor's excavations of several private chapels beneath Rameses II's small Abydos structure (called the "Portal" temple by Flinders Petrie).

Private individuals were also buried at North Abydos in the Middle Kingdom, in a huge cemetery, probably more than 80 hectares in area. This cemetery has been investigated by Janet Richards, who has identified two types of non-elite burials. The simplest ones consist of shallow pit graves. Most of the shaft graves and some of the pit graves had surface chapels with inscribed stelae. The more elaborate shaft graves frequently occur in pairs, some of which had superstructures of large multi-room mastabas. Associated grave goods demonstrate that a wide range of Middle Kingdom society, not only elites, had access to craft/

grave goods in costly imported materials.

At South Abydos, Senusret III built a mortuary complex within a huge T-shaped enclosure at the base of the limestone cliffs, which was excavated in the early 20th century by Arthur Weigall and Charles Currelly, and recently investigated by Josef Wegner (University of Pennsylvania). A rock-cut passage that led to the tomb, which had no superstructure, was designed with dummy rooms and blocked and hidden passages. The subterranean burial chamber was lined in red quartzite, and both the granite sarcophagus and canopic chest were concealed behind walls. But this burial chamber is located only about midway in the tomb, with a long curving passageway continuing to a chamber, 9 × 4 meters, lined with red quartzite (Figure 7.4). It is not known if the king was buried in his Abydos tomb – or much farther north at his Dahshur pyramid.

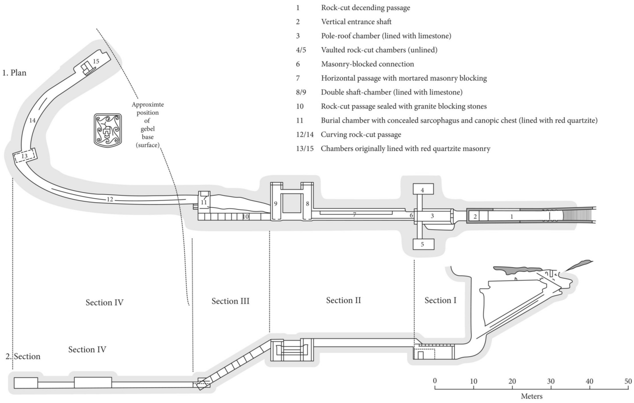

1 Rock-cut decending passage
2 Vertical entrance shaft
3 Pole-roof chamber (lined with limestone)
4/5 Vaulted rock-cut chambers (unlined)
6 Masonry-blocked connection
7 Horizontal passage with mortared masonry blocking
8/9 Double shaft-chamber (lined with limestone)
10 Rock-cut passage sealed with granite blocking stones
11 Burial chamber with concealed sarcophagus and canopic chest (lined with red quartzite)
12/14 Curving rock-cut passage
13/15 Chambers originally lined with red quartzite masonry
1. Plan
Approximte position of gebel base (surface)
Section IV
Section III
Section II
Section I
2. Section
Section IV
0
10
20
30
40
50
Meters

Figure 7.4 Plan of the rock-cut tomb of Senusret III at Abydos.

Source: Joseph Wegner, “Reopening the tomb of Senwosret III at Abydos,” Egyptian Archaeology 30 (Spring 2007), p. 39. Used by permission of Josef Wegner.

Associated with Senusret’s Abydos complex was a large mortuary temple next to the valley edge which was connected to the tomb by a road ca. 750 meters long. The limestone temple was designed with a pylon gateway, with storerooms and quarters for temple personnel in mud-brick. Reliefs that decorated the temple include scenes connected with the cult of Osiris.

The temple was first investigated in 1899 by David Randall-MacIver, and since the 1990s by Josef Wegner. Sealings found in the recent temple excavations have titles which provide information about different priests and officials associated with the cult. Wegner's excavations have also uncovered *in situ* evidence for the organization and functioning of an Egyptian temple. To the east of the temple (East Block) were storerooms for ritual equipment and materials, such as incense and oils, and offerings, especially bread, beer, and meat. Residences and administration rooms for the temple staff were located in the West Block. Outside the temple to the east was a production area where bread and beer were made. Tools for butchering meat (mainly cattle) and processing fish were also found there, as were tools for cloth production.

Janet Richards's theoretical work on the conceptual landscape at Abydos offers a better understanding of the ancient Egyptians' perceptions of this sacred space. At Abydos there were layers of meaning in the physical symbolism of the place and its political, mythological, and historical associations – beginning with the burials of the earliest kings and the much later cult of Osiris, the mythological dead and resurrected king whose cult was important to the afterlife of all Egyptians (not just the royal dead). With a broadening of monument building and rituals/festivals there in the Middle Kingdom, the sacred landscape of Abydos came to be shared by a national and not just local population.

7.6 12th- and 13th-Dynasty Pyramids

Amenemhat I was the first king of the Middle Kingdom to build a pyramid as his tomb. Probably near Itj-tawy, the new capital that he founded, his pyramid was at Lisht, to the east of the northern Faiyum. A late Old Kingdom model was used for the design of this pyramid, which had a base line of 84 meters. The pyramid was built on a terrace, with mastaba tombs to the east and a number of tomb shafts for royal women to the west, developments seen in earlier royal tombs at Thebes. Although stones from Old Kingdom pyramids were reused in Amenemhat's monument, including granite blocks from Khafra's Giza complex, the pyramid's core consisted of small locally quarried blocks, mud-brick, and loose debris. The burial chamber and valley temple are now below the water table, and so cannot be examined or excavated except at great cost.

Also at Lisht was the larger pyramid of Amenemhat I's son, Senusret I (Figure 7.5). Gaston Maspero first identified the owner of this pyramid in 1882. Major excavations have been conducted there by the Metropolitan Museum of Art, most recently in the 1980s by Dieter Arnold. With a base line of 105 meters, this pyramid was constructed with internal reinforcing walls of limestone. They consisted of four thick walls, two along the pyramid's diagonal lines, and two from the centers of the four bases, with parallel walls extending from them. Between these walls were slabs of limestone arranged in steps. The limestone came from quarries to the south, southeast, and southwest of the pyramid. Despite the pyramid's innovative design, construction problems weakened the structure and today it is a low mound of stone and rubble. Huge granite plugs of ca. 20 tons blocked the subterranean passageway to the burial chamber, which was located in the bedrock beneath (or near) the pyramid's center.

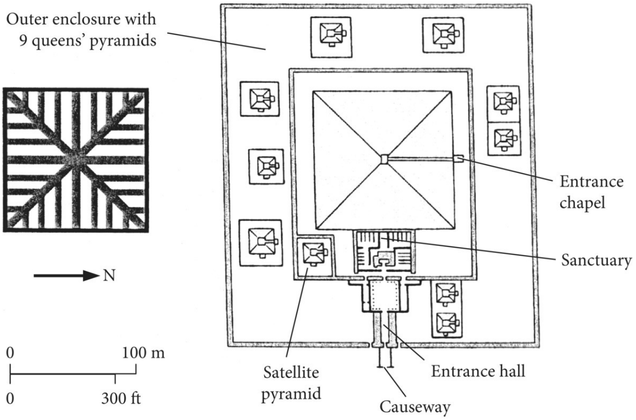


Figure 7.5 Plan of Senusret I's pyramid at Lisht.

Source: Drawn by Philip Winton. From Mark Lehner, *The Complete Pyramids*. London and New York: Thames & Hudson, 1997, p. 170.

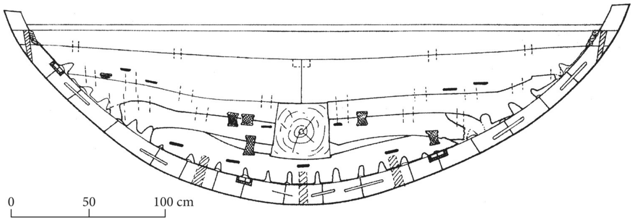


Figure 7.6 Planks excavated at the Lisht pyramid of Senusret I, reconstructed into a cross-section of a freight boat.

Source: Reproduced by permission of Cheryl Ward.

Similar to 6th-Dynasty ones, Senusret I's mortuary temple is not well preserved. Eight standing statues of the king were found that had been placed in niches along the causeway. Statues of the king wearing the Red Crown of Lower Egypt were on the causeway's north side, with statues with the White Crown of Upper Egypt on the south. A small subsidiary pyramid was located to the south of the mortuary temple, and between the inner stone enclosure wall and an outer one of mud-brick there were nine more small pyramids. One of these was for Senusret I's wife, Neferu, and the last one built may date to a later reign, long after the king's death.

Later 12th-Dynasty pyramids were farther south, at Dahshur and Hawara. Amenemhat II's pyramid at Dahshur has not been well preserved because sand was used as fill. When its interior retaining walls of limestone were robbed for use in later construction, the structure collapsed. Jacques de Morgan, who excavated at the site in 1894–1895, was mainly interested in the rich jewelry and other artifacts he found in the subsidiary tombs of two princesses.

Senusret II built his monument at Lahun – the first royal pyramid of mud-brick, with a base line of 106 meters. Interior reinforcing walls of limestone extended out from a core of limestone bedrock. Unusually, the subterranean burial chamber was reached from a vertical shaft to the south of the pyramid and a long horizontal passage – probably designed to foil tomb robbers. A larger vertical shaft for construction of the subterranean passages and chambers was hidden beneath the passage to another tomb. When Flinders Petrie excavated this pyramid all that was left in the burial chamber were some bones and a gold uraeus from a crown. Inlaid with faïence, feldspar, and carnelian, the uraeus had a head of lapis lazuli and garnet eyes. For archaeologists, the most important architecture from Senusret II's reign is the nearby town that was constructed at Kahun (see 7.7).

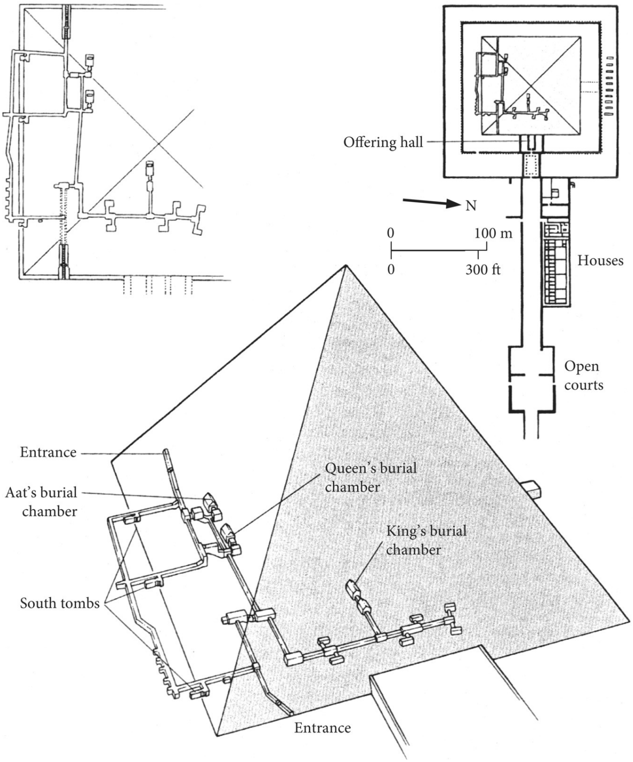
In 1913 Petrie and Guy Brunton found the shaft tomb of a daughter of Senusret II, Princess Sit-Hathor-Iunet, to the south of the king's pyramid. Although the tomb had been robbed, boxes with her jewelry, cosmetic equipment, and canopic jars were hidden in a sealed recess in the tomb. Called the Treasure of Lahun, the jewelry includes a gold headband decorated with a uraeus, rosettes, and gold "plumes" (Plate 7.5), and two gold pectoral necklaces, one with Senusret II's cartouche and the other with the cartouche of the princess's nephew, Amenemhat III. A mirror made of imported silver has a handle of obsidian, probably imported from the southern Red Sea region.

Senusret III, the great builder of the 12th Dynasty, chose Dahshur as the site of his pyramid. With a base line of 105 meters, the pyramid was made of mud-brick laid horizontally and encased in Tura limestone. With an unusual entrance passage on the west side of the pyramid, the burial chamber was lined in granite and contained a granite sarcophagus. Above the granite roof, Dieter Arnold found a second roof to relieve stress, made of five pairs of enormous limestone blocks, each weighing about 30 tons – above which was another roof of vaulted mud-brick. With no evidence of an actual burial or canopic equipment, the question remains whether Senusret III was buried in this pyramid or at Abydos (see 7.5).

Seven subsidiary tombs, now thought to have been covered by small pyramids, were to the north and south of Senusret III's pyramid. The northern tombs were connected by two underground galleries, where Jacques de Morgan found boxes with jewelry and toilet articles of two princesses, Sit-Hathor and Merit. The boxes contained hundreds of artifacts, many in gold and semi-precious stones – similar to the treasure that Petrie and Brunton would later find at Lahun. From the southwestern subsidiary pyramid a shaft and passage led to the robbed burial of the king's mother, Weret, which was discovered in 1994 by the Metropolitan Museum of Art expedition. More jewelry was found in a niche at the bottom of this shaft – including over 6,500 tiny beads in gold, carnelian, lapis lazuli, and turquoise. As a result of these and other finds, Middle Kingdom jewelry is generally considered to be the high point of this craft in ancient Egypt.

In a second building phase the pyramid’s enclosure was extended to the north and south, and an unusual temple, now destroyed, was built to the south. Instead of the elaborate mortuary temples that were built with earlier pyramids, a small temple was built on the east side, which Arnold thinks reflects a decline in the royal mortuary cult. The buried cedar boats discovered at Dahshur by de Morgan were next to a mud-brick structure outside the southwest corner of the pyramid’s enclosure wall.

Amenemhat III, the son of Senusret III, built two pyramid complexes, at Dahshur and Hawara. The Dahshur pyramid (Figure 7.7), which was made of mud-brick with limestone casing, was designed with a complex arrangement of subterranean corridors, chapels, and chambers, including burial chambers for the king and two queens. Although the tombs had been robbed, some of the queens’ burial equipment was still in their burial chambers. Since the pyramid was not built on a solid base, its weight created stress on the underground chambers and passages. The pyramid was abandoned as the king’s burial place, but all of the constituent elements of a pyramid complex, including a small mortuary temple, causeway, and valley temple, were nonetheless constructed. In the floor of the complex’s valley temple, Rainer Stadelmann has found a small limestone model of the pyramid’s underground chambers, which may have aided the tomb’s builders as a kind of three-dimensional blueprint.


Offering hall
N
0
100 m
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Houses
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courts
Entrance
Aat's burial
chamber
Queen's burial
chamber
King's burial
chamber
South tombs
Entrance

Figure 7.7 Plan of Amenemhat III's pyramid at Dahshur.

Source: Drawn by Philip Winton. From Mark Lehner, *The Complete Pyramids*. London and New York: Thames & Hudson, 1997, p. 179.

Amenemhat III's second pyramid at Hawara, also in mud-brick with limestone casing, was designed with elaborate devices to foil tomb robbers. These included blind passages and passage entrances hidden in the ceilings of other passages. The burial chamber is unique: it is made of a gigantic block of quartzite seven meters long, weighing ca. 110 tons, which was covered by two layers of blocks, in quartzite and limestone, with two more ceilings above these blocks. This structure provides evidence of a technique used by the Egyptians to position heavy stones. Before the burial, the ceiling blocks were supported by beams resting on sand that was then released into tunnels, with the ceiling slabs falling into place. It took Flinders Petrie two excavation seasons to locate the water-logged burial chamber, which contained two stone sarcophagi and canopic chests, for the king and possibly for a queen. The elaborate construction of rooms, galleries, and courts to the east of Amenemhat III's Hawara pyramid was called the "Labyrinth" by visitors from the Greek world. Little remains in the area of the Labyrinth now, but it has been suggested that the architecture there was an attempt to imitate the plan of Djoser's pyramid complex at Saqqara (3rd Dynasty; see 6.2) – emulating a much earlier model of the royal mortuary monument.

It is not known where the last two rulers of the 12th Dynasty, Amenemhat IV and Queen Sobekneferu, were buried. Two unfinished pyramids which are located at Mazghuna, to the south of Dahshur, may date to the 13th Dynasty. Possibly eight pyramids, from South Saqqara to Mazghuna, were built by 13th-Dynasty kings, but little remains of them except for some underground chambers. King Hor, who ruled for less than a year, usurped a shaft tomb between the inner and outer walls of Amenemhat III's pyramid at Dahshur. The king's wooden *ka*-statue, the only known such statue, was found in the antechamber of the enlarged tomb, which is a greatly diminished mortuary monument compared to the 12th-Dynasty pyramids.

7.7 Towns and Domestic Architecture: Kahun and South Abydos

In 1888–1889 and 1889–1890 Flinders Petrie was the first to excavate at the town associated with Senusret II's pyramid at Lahun. The town was built next to the pyramid's valley temple and is called Kahun, to distinguish it from the pyramid site (Figure 7.8). Kahun is an example of a specialized settlement, planned by the state from its onset, and is not a typical town where most ancient Egyptians would have lived. But it was the first ancient Egyptian town ever excavated, and since settlement evidence is poorly preserved in Egypt (see 3.3), it remains an important site.

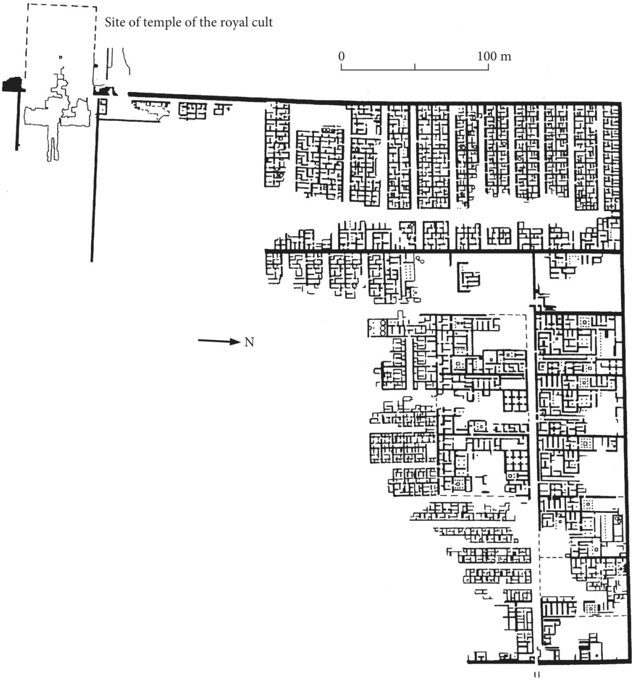


Figure 7.8 Plan of the pyramid town of Kahun.

Source: B. J. Kemp, *Ancient Egypt: Anatomy of a Civilization*. London: Routledge, 1989, Figure 53. Copyright © 1989 by Routledge. Reproduced by permission of Taylor and Francis Books UK.

Although some of the town had been destroyed by later cultivation in the floodplain, Petrie was able to make plans of more than half of its mud-brick houses, walls, and streets. (In two field seasons he excavated over 2,000 rooms!) The plan of the town was rectangular, 335 meters long on the preserved west side and 384 meters on the north. It was not fortified, but the rows of houses were surrounded by a thick wall, with one preserved gateway next to the royal mortuary temple. Another thick wall divided off part of the town on the west. Rectangular houses of different sizes were arranged in a grid along streets that ran east–west and north–south, which Barry Kemp suggests exhibits the highly structured bureaucratic organization of the Middle Kingdom. He also cites evidence of other planned state towns of the Middle Kingdom as examples of internal colonization, such as at Karnak, and Abu

Ghalib and Tell el-Dab’a in the Delta (see 7.11).

Kahun was abandoned in the 13th Dynasty and later occupants disturbed parts of the site, but Middle Kingdom artifacts were excavated in their original contexts in some houses – as well as seeds of flowers and vegetables. Petrie found tools used by builders (working in both mud-brick and stone), carpenters, copper workers, farmers, fishermen, and weavers. Although many materials would have been provided by the state, the agricultural tools suggest that some workers at Kahun cultivated their own food. Game boards and children’s toys (balls, tops, wooden dolls, etc.) were also found, as were toilet articles and jewelry. Some artifacts, such as the carved ivory “wands” and stone column (offering?) stands, were probably used for private religious or magic practices in homes.

Five large houses with many rooms, ca. 60 × 42 meters in area, were located on the north side of the town, at the western end of which was an area that Petrie called the Acropolis, built on a higher outcrop of rock with access via a rock-cut staircase. Three more large houses were located to the south. In his perceptive study of the settlement, Kemp reconstructs the large houses with a columned reception room, court with pool and portico, bedrooms with sleeping alcoves, granaries, and miscellaneous rooms – similar to what is represented (in a very foreshortened version) in a wooden model from Meketra’s tomb (see 7.4). More granaries were also located in other parts of the town.

Kemp estimates that the granaries in the five large houses could have held enough grain to support a population of 5,000, or 9,000 people on minimum rations. Many of the houses that Petrie excavated at Kahun (ca. 220 of them), however, were small ones arranged back to front in rows with only four small rooms each. With up to six persons in a house, Kemp estimates that the entire community would have numbered fewer than 3,000 persons – a more likely population. If ca. 9,000 people lived there on minimum rations, the town would have been continuously on the brink of disaster, and Kemp’s numbers point out the problems of calculating population estimates based on different archaeological criteria.

Petrie thought that the Acropolis was the king’s residence when he visited his pyramid site. Re-examination of this structure by Nicholas Millet (Royal Ontario Museum) in the 1990s revealed a similar plan to the other large "mansions" in the northern part of the site. To the south of the Acropolis is an open space where the recent excavations uncovered evidence of what was probably a small temple – possibly that of a god named Sepdu known from textual evidence. Kemp suggests that this area (or the area just to the south of it) was where the town's administration was located. The town government was headed by a mayor, and although the vizier resided at Itj-tawy, there was an office of the vizier at Kahun for legal business.

Hundreds of fragments of papyri were found at Kahun, and administrative documents are especially informative about the town organization. There are lists of gangs of workmen, their dates of work and work details, and of officials and other personnel involved – including soldiers, priests, and scribes. Legal documents include deeds, wills, and appointments of officials. Records of services rendered and payments made were written on small pieces of papyrus. The so-called census lists recorded all members of individual households, which included up to three generations, and their servants (mostly females and their children) – possibly for purposes of taxation or conscription. A number of people named in the Kahun papyri are listed as Asiatics (*aamu*), suggesting a large presence of people of foreign origin there, who served in households, temples, and the military.

Other papyri from Kahun include model letters for schoolboys, in addition to the real correspondence, and fragments of wooden practice boards used in schools were also excavated. A veterinary text discusses symptoms and treatment of animal diseases, and an important medical papyrus deals with gynecological problems, including those of sterility and pregnancy. A fragmentary text of a religious hymn was found and there were also literary texts. Mathematical works include calculations in solid geometry.

Petrie excavated a number of infant burials beneath house floors at Kahun. But adults, including some officials of the king, were buried in cemeteries near the town and pyramid. It is highly unusual in Egypt or elsewhere that three different forms of evidence would be so well preserved: the planned layout of a town and its houses, burials of people who lived in the houses, and texts which give much more specific information about the operation of the settlement – in addition to that of the nearby mortuary temple and pyramid.

A similar planned state town is known at South Abydos, which has recently been excavated by Josef Wegner. Possibly as large as nine hectares, the town, named Wah-sut, was associated with Senusret III's Abydos mortuary complex (see 7.5). Seal impressions of the "house of the mayor" have been found in a large mud-brick house (Building A, ca. 80 × 52 meters), and there are at least 11 more elite houses to the east – which are similar to the large northern houses at Kahun. The town was laid out in blocks 100 cubits (52.5 meters) wide, with streets of 5 cubits (2.6 meters). The houses show evidence of internal remodeling and changing use from the late 12th Dynasty though the Second Intermediate Period and probably into the New Kingdom.

The house of the mayor at South Abydos was planned with rectangular granaries, and its garden still contained mud-brick tree pits with remains of sycamore trees. Probably the most remarkable find in this house is a painted mud-brick (Figure 7.9) from the private quarters for a princess that had been transformed from the granaries. On the brick's base is a scene of a mother holding her newborn baby, with two other women (assisting?) and two standards of the goddess Hathor, who protected women. Magical creatures painted on the brick's edges were probably also for protection at childbirth. In ancient Egypt women gave birth squatting on bricks (one sign used to write *ms*, "to give birth," is a pictogram of this), and the Abydos brick may have been used for a real birth in the large house.

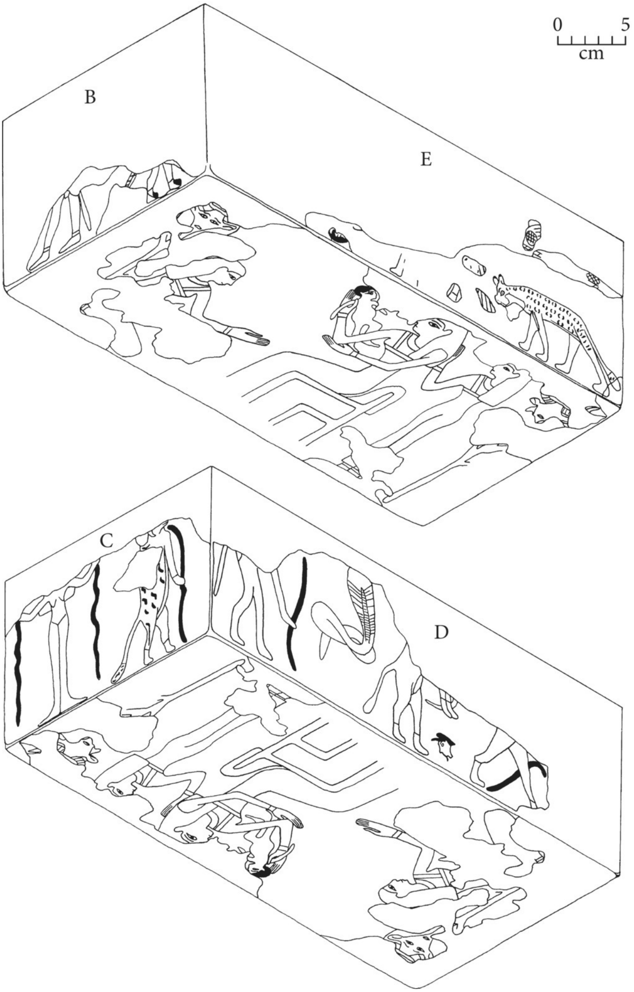


Figure 7.9 Descriptive scheme of images painted on a birth brick from South Abydos, Building A.

> Source: Josef Wegner, “Tradition and Innovation: The Middle Kingdom,” in *Egyptian Archaeology*, edited by Willeke Wendrich. Oxford: Wiley-Blackwell, 2010, Figure 7.4.

7.8 Nomarchs in Middle Egypt: The Beni Hasan Tombs

As evidence of their socio-political positions, nomarchs in Middle Egypt built impressive tombs at Qau, Asyut, Meir, Deir el-Bersha, and Beni Hasan. These tombs were carved into the limestone cliffs near the provincial capitals, and were designed with an outer court and a rock-cut pillared room from which a shaft led to the burial chamber. Sometimes there is evidence of a series of courts, porticos, and passageways leading from the tomb across the low desert. Many of the scenes in these tombs are in poor condition today, and it is fortunate that copies were made of a number of them in the 19th century. One especially well-known scene from the tomb of Djehuty-hotep at Deir el-Bersha, of a colossal seated statue on a sledge being dragged with ropes by four rows of workmen, was copied by John Gardner Wilkinson on one of his Egyptian sojourns (1821–1856) (Figure 7.10).

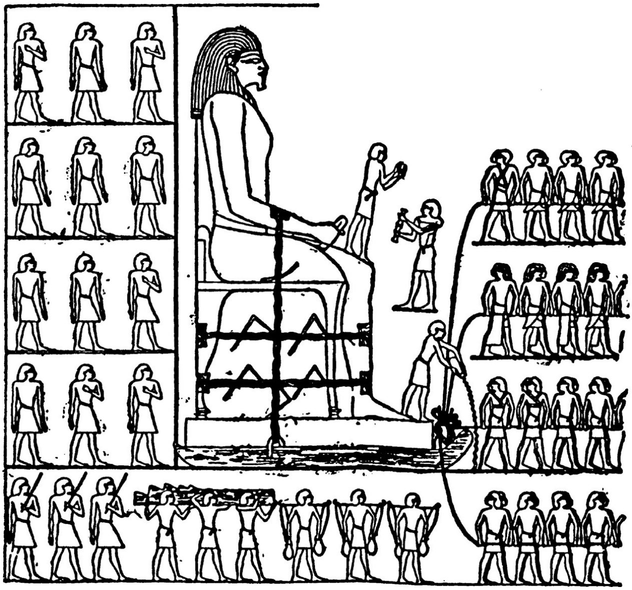


Figure 7.10 Scene of moving a large statue from the tomb of Djehuty-hotep, Deir el-Bersha.

Source: Somers Clarke and R. Engelback, *Ancient Egyptian Construction and Architecture*. New York: Dover, 1990, Figure 79. Used by permission of Dover Publications.

At Beni Hasan 39 large rock-cut tombs, only 12 of which were finished with inscriptions, were recorded in the late 19th century by George Fraser and Percy Newberry. They were built in an upper cemetery area by rulers and officials of the Oryx Nome (16th Nome of Upper Egypt) in the 11th and 12th Dynasties. Some of the larger tombs contain biographical inscriptions and were painted with scenes of "daily life," comparable with those found in elite tombs of the later Old Kingdom, including depictions of craft activities (weaving, carving, pottery production, etc.); agriculture and food preparation; and hunting, fishing, and fowling. Some of the tombs have scenes of conflict. The tomb of Khnumhotep II contains the well-known scene of a visiting group of nomadic traders, led by a chief named Abisha.

7.9 Mining in the Sinai and a Galena Mine in the Eastern Desert

Although activity continued at Wadi Maghara during the 12th Dynasty, where there are inscriptions and a stone structure with evidence of copper production, the main focus of Middle Kingdom mining in the Sinai was at Serabit el-Khadim. Flinders Petrie made the first archaeological investigations at the site in 1904–1905. Petrie recorded inscriptions, excavated the Middle and New Kingdom Hathor temple, and investigated the many mines. More recently work there was conducted in the 1990s by Dominique Valbelle (the Sorbonne) and Charles Bonnet (University of Geneva), who re-excavated the Hathor temple.

Serabit el-Khadim was mined for its turquoise, with a nearby copper mining site to the west at Wadi Nasb. Beginning with the reign of Amenemhat I, expeditions were sent there during the 12th Dynasty. French investigations in the 1990s cite numerous small settlements in the region, and give a detailed description of a settlement located on a plateau in which there were three different areas: an open area with circular enclosures to the south of the Middle Kingdom temple, an industrial area, and a fortified camp with small structures of dry stone or stone with sand mortar.

Some crudely written inscriptions at Serabit are in a script called Proto-Sinaitic, dating either to the 12th or 18th Dynasty. The script probably wrote a West Semitic language with 27–29 consonantal signs, most of which were derived from Egyptian hieroglyphs. It has been proposed that this is the earliest alphabetic writing system, invented and used by Canaanite peoples working at the

Egyptian turquoise mines. The Serabit Proto-Sinaitic inscriptions have not been completely deciphered, but the name of a Canaanite goddess, Ba'alat, who has plausibly been identified with Hathor, is recognizable. A similar (and possibly earlier) script has recently been found in the Western Desert, in the Wadi el-Hol (see 7.13).

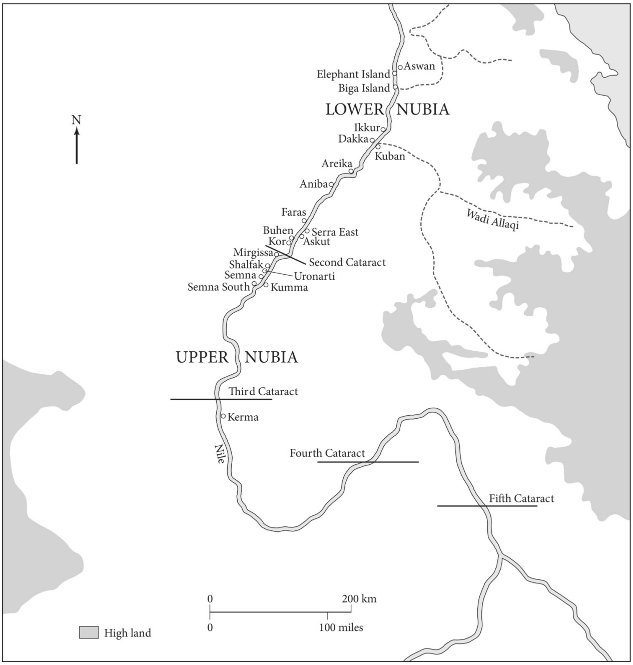
At the harbor site of Ayn Soukhna (see 6.12) on the Egyptian side of the Gulf of Suez, there is also extensive evidence in the Middle Kingdom of copper mining and smelting. The extracted malachite was then reduced into copper in a series of operations at the site for which there is ample archaeological evidence – including furnaces and tuyères.

During the Middle and New Kingdoms galena was mined in the Eastern Desert near the Gulf of Suez at Gebel Zeit, which was investigated in the 1980s by the French Archaeological Institute, Cairo, under the direction of Georges Castel and Georges Soukiassian. At Site 1, where there was a base camp/settlement, a Middle Kingdom shrine was built in a natural cave. The shrine, which was dedicated to Hathor, Horus, and Min of Coptos, was made into a larger sanctuary with a circular stone wall in the New Kingdom. Votive ceramic female figurines of Nile Valley types (Middle Kingdom and later) were found there. The miners subsisted on whatever was available locally – including gazelle – and on mollusks and fish from the sea.

The main mines for galena, which the Egyptians used as eye paint, were to the south of Site 1, at Site 2, which was about 1.8 kilometers in length. The mines were tunneled in three main levels, to a vertical depth of ca. 150 meters. The difficult working conditions of these deep mines, in an isolated desert location, demonstrate the logistical skills needed to obtain this highly desired mineral. But since these operations were small in scale it is likely that this mining was not conducted by state-organized expeditions but by independent operators assisted by traders, such as those depicted transporting galena in the Beni Hasan tomb of Khnumhotep II.

7.10 Egyptian Forts in Nubia and Indigenous Peoples There

The great importance that the state placed on control of Nubia during the Middle Kingdom is seen in the series of Egyptian forts that were built there – and the organization required to man and supply them from Egypt. As reported in Egyptian texts, nomadic peoples of the Eastern Desert known as the *Medjay* posed a potential problem, but some of them were also employed as mercenaries in the forts. The C-Group peoples, who first came into Lower Nubia in the late Old Kingdom (phase Ia in the relative chronology of the C-Group), lived in areas where the Egyptians subsequently built several strategically placed forts. During the Middle Kingdom the C-Group continued to occupy Lower Nubia (phases Ib and IIa). While some C-Group burials have increasingly larger superstructures, such as David O'Connor demonstrates for Cemetery N at Aniba, C-Group burials did not become greatly differentiated until after the Middle Kingdom (phase IIb). In this phase a few burials have massive stone superstructures – up to 16 meters in diameter, sometimes with mud-brick chapels and vaulted burial chambers – and numerous imported grave goods. These monuments are symbolic of greater social and economic differences and probably the emergence of powerful chiefs when Egypt no longer controlled the region. The addition of mud-brick chapels exhibits an Egyptian influence in traditional C-Group mortuary practices.


Aswan
Elephant Island
Biga Island
LOWER NUBIA
N
Ikkur
Dakka
Kuban
Areika
Aniba
Wadi Allaqi
Faras
Buhen
Serra East
Kor
Askut
Mirgissa
Second Cataract
Shalfak
Semna
Uronarti
Semna South
Kumma
UPPER NUBIA
Third Cataract
Kerma
Nile
Fourth Cataract
Fifth Cataract
0
200 km
0
100 miles
High land

Map 7.2 Sites in Upper and Lower Nubia during the Middle Kingdom and Second Intermediate Period.

From forts at Elephantine and probably Biga Island, on Egypt's southern frontier (the First Cataract), Lower Nubia was reconquered in the early 12th Dynasty under Amenemhat I and Senusret I. Beginning with Senusret I's reign a number of Nubian forts were built, some in areas where C-Group populations were concentrated, such as at Aniba, Dakka, Faras, and Buhen, which had first been used during the Old Kingdom. The forts at Ikkur and Kuban, on opposite banks of the Nile, protected river access to the gold mines of the Wadi Allaqi. With a large administrative complex, the fort at Kor near Buhen may have been a center for overland trade routes. On the east bank, the fort at Serra East was named "Repelling the *Medjayu*," which suggests that some *Medjay* posed a military threat there.

By Middle Kingdom times a powerful polity had developed farther up the Nile in the Kerma basin, to the south of the Third Cataract, and the presence of the Kerma kingdom explains the impetus for constructing the southernmost Egyptian forts in Nubia. Through military campaigns, Senusret III pushed Egyptian control south and five forts were built within sight of each other as far as the new frontier of Semna, which dominated the rocky bluffs overlooking the southern end of the Second Cataract region. Older forts were also expanded or rebuilt. The largest of the new frontier forts was at Semna, with a fort across the river at Kumma, to the north of which was the island fort of Uronarti with a large “palace” – possibly where the king would stay during military campaigns. Two more forts were built on the west bank at Semna South and Shalfak further north. Beginning at the Mirgissa fort, a mud-covered slip-way two kilometers long had been excavated to drag ships around the cataracts when there was low water.

To conform to their natural setting, some forts could not be designed with rectangular walls. But the fort at Buhen (Figure 7.11), which was built along the river bank, did not have this problem and its inner citadel formed a huge rectangle, ca. 150 × 138 meters. Inside the citadel, which was better preserved on the north and west sides, rectangular buildings of the garrison were laid out in a grid along streets. In the northwest corner was a commander’s building with pillared halls, to the east of which were five long narrow galleries with columns in the center. The galleries are similar in size and design to what were possibly sleeping barracks in the 4th Dynasty royal complex that Mark Lehner has excavated at Giza (see 6.7). Buhen also had a temple, and there were probably many granaries. The citadel was fortified with a 5-meter-thick mud-brick wall with three gateways, one on the west and two facing the river. Towers were located along the west wall, at the gateway, and at the north and south ends.

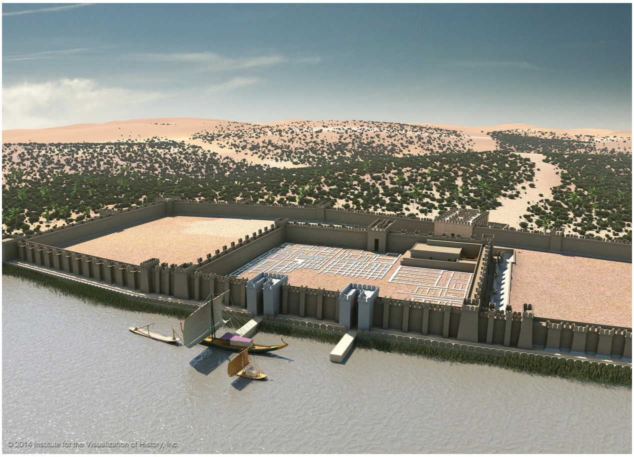


Figure 7.11 Reconstruction of the 12th-Dynasty fort of Buhen, generated from a 3-D computer model originally created in 1993 by Bill Riseman and updated by the Institute for the Visualization of History.

Source: © 2014 Institute for the Visualization of History, Inc.

In the 1960s Buhen was excavated by British archaeologist Walter Emery, who uncovered evidence of very sophisticated defensive architecture. At the base of the citadel walls was a lower walled rampart, with slits for archers. Below this was a dry moat cut over 3 meters deep into the bedrock with a sloping glacis on its outer side. The fort was designed to be defended by archers, and the dry moat and glacis were to protect the walls from tunneling or being undermined by siege devices. Beneath the northeast gate was a stone-lined passage that provided access to river water if the fort was under siege. Beyond the citadel, a thick outer defensive wall with another rock-cut moat and rampart spanned an area ca. 450 × 200 meters. A cemetery was located along the western area enclosed by the great outer wall, and two towers flanked its massive gate.

Thus, during the Middle Kingdom 17 Egyptian forts (and numerous lookout points) were constructed along a ca. 400-kilometer stretch of the river in Lower Nubia, from Aswan to Semna. Built for military control of local peoples and Egypt's frontier, the forts were a strong symbol of Egyptian authority to the Kerma kingdom farther upstream. Some forts were also centers for trade and exchange, especially of raw materials from the more distant south, and two forts controlled access to gold mining areas in the Wadi Allaqi. The forts allowed trade goods – as well as administrative communications – to flow north via the river to Egypt, and men and supplies to move south through Lower Nubia.

Like the state towns at Kahun and South Abydos, the Nubian forts were carefully planned and designed on a model with an interior grid of mud-brick buildings and streets. These planned state settlements also provide evidence of the huge redistributive system that reached its maximum during the reign of Senusret III. In Nubia, hundreds of men, and possibly also their families, lived in the forts and had to be supplied from Egypt. Granaries have been found in many of the forts, and Barry Kemp has estimated that the largest complex of granaries at Askut had a capacity of ca. 1,632 cubic meters, which could supply over 5,600 (minimum) annual ration units. The forts were probably supplied with more food than the minimum required to feed all of their inhabitants, however, and calculating the number of persons fed at any fort is problematic.

Maintaining these garrisons in Nubia would certainly have required a large, effective administrative system, both state and military, to acquire and/or manufacture, organize, transport, and redistribute food, goods, and materials, to areas with few local resources that were remote from Egypt. Hundreds, perhaps thousands, of men were needed to construct and maintain the forts, and serve as soldiers, sailors, scribes, and officials – an accomplishment as impressive in its organization as the construction of Khufu’s Giza pyramid.

British Egyptologist Harry S. Smith has argued that at the end of the 12th Dynasty a system of rotating military units for the garrisons in the Nubian forts shifted to permanent settlers. According to Stuart Tyson Smith (University of California, Santa Barbara), the archaeological record at Askut confirms this major change of organization, which helped to make the occupation of Lower Nubia more self-sufficient. Sealings of officials at Askut show that Lower Nubia remained under Egyptian control until the later 13th Dynasty, and Egyptian pottery (Marl A and Marl C) found in late 13th-Dynasty contexts there demonstrates that goods were still being shipped from both Upper and Lower Egypt. At the end of the 13th Dynasty, the descendants of the first Egyptian settlers in the Nubian forts remained there under the rule of the king of Kush.

The Second Intermediate Period

7.11 The Second Intermediate Period: The Hyksos Kingdom in the North

With the Second Intermediate Period, rule in Egypt was once again divided, but for the first time there were non-Egyptians, the Hyksos kings of the 15th Dynasty, ruling a state in the north. Little is known about the 14th Dynasty, which consisted of a number of minor kings in the Delta, contemporary either with some of the 13th-Dynasty Egyptian kings or with the 15th-Dynasty Hyksos kings.

In 1905–1906 Flinders Petrie was the first to recognize that the sloping mound he excavated at Tell el-Yahudiya in the eastern Delta, about 20 kilometers northeast of Cairo, was not Egyptian in design but was similar to Middle Bronze Age (MB) fortifications in Syria-Palestine. Non-Egyptian style burials of MB Palestinian types were also found in or near the site, and black juglets with incised white designs from these burials are called Tell el-Yahudiya Ware. Made locally, the juglets are unlike Egyptian wares of the period, but typical of MB culture in Palestine.

Since 1966 the Austrian Archaeological Institute, Cairo, under the direction of Manfred Bietak and now Irene Forstner-Müller, has been excavating at the Delta site of Tell el-Dab’a, which has been identified as the Hyksos capital of Avaris (Figure 7.12). An Egyptian settlement existed at the site in the First Intermediate Period, and a state town was established there by Amenemhat I. During Senusret III’s reign a temple was constructed and an administrative complex was rebuilt at Ezbet Rushdi es-Saghira to the northeast of Tell el-Dab’a. The Middle Kingdom site, which was located near a deviation in the now extinct Pelusiac branch of the Nile, also included a workmen’s town planned on a grid, like other 12th-Dynasty state construction.

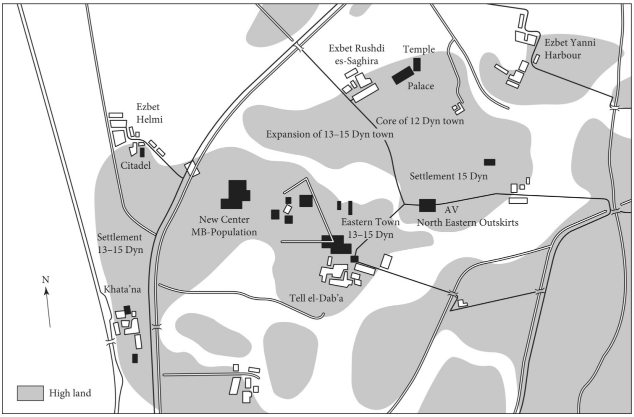

Exbet Rushdi
es-Saghira
Temple
Palace
Ezbet Yanni
Harbour
Ezbet
Helmi
Citadel
Core of 12 Dyn town
Expansion of 13–15 Dyn town
Settlement 15 Dyn
AV
North Eastern Outskirts
New Center
MB-Population
Eastern Town
13–15 Dyn
Settlement
13–15 Dyn
N
Khata'na
Tell el-Dab'a
High land

Figure 7.12 Plan of the site of Tell el-Dab'a, dating to the 12th–13th Dynasties and later the 15th-Dynasty Hyksos capital of Avaris.

Source: Ian Shaw (ed.), *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000, p. 187.

Although there are problems dating the excavated strata at these sites in terms of cross-dating artifacts with types known in Syria-Palestine (which may also reflect problems dating sites there), there is good stratigraphic evidence of settlements in use during a critical period of socio-political change in Egypt. Beginning in the late 12th Dynasty, the material culture of Tell el-Dab'a was becoming increasingly non-Egyptian – with in-settlement burials (not in a separate cemetery), MB IIA copper weapons in many male burials, houses of a design known in Syria, and more MB ceramics. Bietak suggests that the Asiatics living there were employed by the Egyptian state, as soldiers and probably also to perform other services such as trading. A 13th-Dynasty palace, built over some of this settlement, was Egyptian in design and similar to the large northern houses at Kahun, but tombs were built within the palace garden (for palace officials?). The burials were in an underground chamber, with a chapel above, one of which may have been in the form of a small mud-brick pyramid. But in front of these tombs were donkey burials, and grave goods included MB weapons. The animal burials, which are very un-Egyptian, strongly suggest (along with the associated grave goods) that the people buried in these tombs were ethnic Asiatics who were employed by Egyptian kings of the 13th Dynasty, when there is some evidence of continued Egyptian activity/trading abroad, including trade with Byblos.

Sometime later in the 13th Dynasty, new work on the palace stopped, but the settlement continued to be used. Burials found in mass graves and house middens can probably be explained by an outbreak of plague. With an increasingly MB material culture in the settlement, there is evidence of bronze tool production in open molds. (Bronze is an alloy of copper and tin. It was produced in some parts of the Near East from ca. 3000 BC onward, but did not become common in Egypt until the New Kingdom.)

By about 1700 BC, the settlement can be identified as the capital of Avaris, where the Hyksos kings of the 15th Dynasty resided. The town expanded to cover ca. 2.5 square kilometers and houses of two different sizes were built, with smaller houses in the eastern sector and clustered around the larger ones. Although more than half of the pottery from this phase consisted of Egyptian wares, locally made MB-type pottery was exported from Avaris to Cyprus, and Lower Nubia and Kerma. Imports at Avaris included a North Syrian-style cylinder seal, and pottery and a gold pectoral from Crete. Two temples, of typical MB II design, were built in the eastern section (in Stratum F). Burials with Egyptian type chapels were located around the temple precinct, but some of them contained the remains of young females, probably sacrifices, placed before the tomb chamber – a very un-Egyptian burial practice.

In the late Hyksos period a fortified complex was built in the far western part of Avaris, in an area now known as Ezbet Helmy where the remains of two palace complexes have been excavated. A channel 2.5 meters deep, lined and covered in limestone blocks, was built to supply water to the complex. In this part of the site there were also many burials of young males, probably the result of the Egyptian conquest of the city under King Ahmose I, the first king of the 18th Dynasty. Monuments in this area were intentionally destroyed and a layer with the remains of a conflagration was evident. After the conquest an early 18th-Dynasty palace was built in which fragments of wall paintings in Minoan style, subject matter, and color scheme were found. This phase of occupation also marks the beginning of a new pottery corpus of Egyptian wares in use at the site.

The most recent work at Tell el Dab'a (geophysical survey and excavations) has revealed a large palatial building (112 × 95 meters), probably of the middle Hyksos period. According to Bietak, the plan of this palace has no resemblance to Egyptian palaces, and its origins can be found in the Middle and Late Bronze Age palaces in North Syria. From an offering pit in the courtyard of this palace eight sealings of the Hyksos King Khayan have been excavated: he was probably the builder of this palace.

Box 7-C Ceramic analysis

Since potsherds are usually the most common type of artifact excavated at pharaonic sites, ceramics, when classified, provide an important key to (relative) dating and to the use of a site. The "Vienna system," a classification system for the fabrics of Egyptian pottery, was devised at a workshop in Vienna in 1980, by archaeologists Dorothea Arnold, Manfred Bietak, Janine Bourriau, Helen and Jean Jacquet, and Hans-Åke Nordström. The Vienna system is now used by most archaeologists in Egypt to provide a consistent classification system for recording and analyzing excavated ceramic fabrics. Much of the information given here in very abbreviated form is taken from *An Introduction to Ancient Egyptian Pottery* (1993), edited by Arnold and Bourriau, following the classification system for fabrics that was formulated in 1980.

The Vienna system classifies ceramic fabrics, which are the intentional result of mixing clay, a plastic material when worked with water, with temper, inclusions that are added to the clay before it is shaped to prevent it from cracking during firing. Most ancient Egyptian ceramics were made from one of two kinds of clay: Nile alluvial clays and marl clays. When fired, Nile alluvial clays are usually red to brown in color. Marl clays, which are found in deposits of shale and mudstone where there are limestone formations along the edge of the valley, usually fire a light buff/grey color. The Vienna system has established five main groups of Nile alluvial clays (Nile A, B1 and B2, C, D, and E), and five main groups of marl clays (Marl A1, A2, A3, and A4; B; C1, C2, and C compact; D; and E), all of which are differentiated in terms of inclusions.

Temper inclusions can be fine to coarse in size, and consist of inorganic or organic materials. Inorganic tempers include different minerals, sand, limestone, and crushed potsherds (known as grog). Organic tempers include ground shell, animal dung, and chaff/straw, which generally burns away when fired, leaving an impression of its shape in the fired fabric.

In addition to the identification of clay and temper, ceramic fabrics are described in terms of porosity and hardness. Marl clay fabrics are usually harder than those of Nile alluvial clays. Color of the fired fabric taken from a fresh break of a potsherd, which is often an indication of how well fired the pot was, is described with a Munsell Soil Color Chart (used by geologists to systematically identify soil colors).

Surface treatment of potsherds is also recorded. Surface finishing can include burnishing or polishing, which makes the pot's surface less porous. Frequently the surface of a pot, either inside or outside, or both, is covered with a thin layer of slip, consisting of clay thinned to a liquid with water, which is often polished when dry. Glazed pots, covered with a coating containing minerals which becomes shiny when fired, are not commonly found in Egypt until Byzantine and Islamic times. However the surface of a pot was finished, its interior and exterior colors are also described with a Munsell Chart.

Decorated pottery with painted designs is not common in Egypt, except in the Predynastic Period (Petrie's White Cross-lined and Decorated classes) and New Kingdom ("Amarna Ware," with decorations in blue paint). Sometimes hieratic potmarks (and more rarely hieroglyphic ones) which recorded information can be identified on potsherds, either incised on the pot before firing, or painted on afterwards.

Classification of fabrics and surface treatment is basically descriptive, but it also touches on some of the choices involved in the technology of ceramic production, which can in turn be informative about relative dating.

In terms of technology, ceramic analysts need to determine how pots were formed: by hand or with a wheel (of different types), which can often be recognized by careful observation. A common method of hand-forming pottery was with coils of fabric, which were smoothed into the desired shape of the pot. The “slow simple wheel” with a fixed center, of a platform with a socket placed on a low pole, was first used in the later Old Kingdom. A scene of such a tool is found in the Saqqara tomb of Ti (5th Dynasty; see 6.11). Pots can be made wholly or partly with a wheel. For example, Maidum bowls, a well-known type of Old Kingdom pot, had bodies made by hand with sharply angled rims made on a simple wheel. A tall axis-pole on a simple wheel, called a “fast simple wheel,” was used from the later Middle Kingdom onward, a good example being depicted in the Deir el-Bersha tomb of Djehuty-hotep (12th Dynasty). The even faster “kick wheel” was not used until sometime in the first millennium BC.

Shape (in profile) and thickness of potsherds are important criteria to record in terms of the technology of production (as well as changes in form and style through time), and selective/diagnostic sherds (usually rim and base sherds) are drawn in profile. If possible, the shape of an entire vessel is also drawn in profile. Pots are usually better preserved in whole forms in burials than in settlements, and form can often be a general indication of function, such as containers for liquids, large storage jars, and kitchen/serving ceramics, for cooking, eating, and drinking.

Ceramic firing techniques are also investigated, sometimes by experimental archaeologists who try to reproduce pots with the same technology as ancient potters – with the same results. Ethnoarchaeologists also observe modern potters in Egypt in order to extrapolate technological information that may be relevant for ancient ceramic production. There are a number of known tomb scenes of kilns, and real kilns have been excavated at some settlements, with notable examples at the 18th-Dynasty site of Tell el-Amarna.

Ceramics are often grouped in wares of pots of the same fabric and surface treatment, similar forms (which usually change through time), and often some criteria of the technology of production. Excavated potsherds of each ware are then quantified, either by total weight or by number of potsherds (or both). Some excavated ceramics are obviously imported wares, but sometimes Egyptian potters imitated prestigious foreign wares. The most precise way for determining the source of clay used in a pot (and its place of manufacture) is neutron activation analysis, which identifies the elements and percentages of these elements in a pot's clay. This information can then be compared to samples taken from foreign pots excavated in their places of origin or known sources of foreign clays. The provenance of pottery, of temper and clays, can also be analyzed in a laboratory by petrographic microscopy and elemental analysis, to look for major and trace elements. The recording and study of excavated ceramics is thus a highly specialized discipline. Excavation teams often include full-time specialists trained in ceramic analysis.

Contents are sometimes preserved in pots or in the soil found inside of pots. Samples must be taken from pot interiors for microscopic analysis. Chemicals from the residues of pot contents may be preserved on the interior surface, requiring laboratory analyses of potsherds.

The excavations at Tell el-Dab'a demonstrate the problems involved in making ethnic identifications of ancient peoples from archaeological and associated textual evidence. Living peoples identify themselves as members of ethnic groups, which can be based on shared political organization, group affiliation, modes of subsistence, spoken language, belief systems, and other criteria. Only some of these criteria may be evident in the material culture (such as styles of dress, artifacts, and architecture of houses, temples, palaces, and forts), not all types of which are always well preserved archaeologically. Since membership in an ethnic group consists primarily of individuals' concepts of affiliation and identity, this is difficult to demonstrate from archaeological and textual evidence.

The Hyksos kings used Egyptian writing systems, recording their un-Egyptian names on scarabs and sealings in Egyptian hieroglyphs, with Egyptian titles of officials. Their personal names were generally West Semitic and not Egyptian. Other historical/textual information about the Hyksos comes only from an Egyptian perspective, which was biased. The textual evidence strongly suggests that the Hyksos who controlled northern Egypt in the Second Intermediate Period were non-Egyptian foreigners who used Egyptian writing and to a certain extent Egyptian modes of administration, and had Egyptians in their service.

But the material culture at Tell el-Dab'a suggests that the situation was more complex. A number of tombs there demonstrate a mixture of cultural traits: Asiatics were buried with their own grave goods and sacrificed animals or humans in tombs that were not in a cemetery outside the settlement; yet some tomb types were adopted from Egyptian ones. A large 13th-Dynasty house at Tell el-Dab'a is similar to the rectangular ones on the north side of Kahun, but there are also Syrian-style houses, and later two MB-style temples. Although MB ceramics increase at the site, Egyptian wares continued to be made or used there, which could represent Egyptians who lived with their Hyksos overlords, and/or Egyptian artisans employed by the Hyksos.

The term *Heqau-khasut* (Hyksos) was used by the Egyptians for the rulers of this polity, and not as the name of this population as a whole. The "Hyksos" at Tell el-Dab'a could represent influxes of people at different times from different parts of southwest Asia. Although the site became the Hyksos capital of Avaris, its population was probably a mixture of Egyptians, various Asiatic groups, and people of mixed descent. The changing material culture at the site represents changing populations through time, but also a certain amount of foreign trade and exchange.

7.12 The Kerma Kingdom in Upper Nubia

A small settlement arose at Kerma, to the south of the Third Cataract in Upper Nubia, after ca. 2500 BC (Early Kerma phase), with round houses made of reeds and wood. Unlike in Lower Nubia, Kerma is located in a region with a broad floodplain where large-scale agriculture was possible. By Middle Kingdom times (Middle Kerma), the growing power of Kerma was a significant reason for Egyptian takeover of Lower Nubia, and this polity is probably to be identified as the Kush of Egyptian texts. Kerma society had become more complex by then, as evidenced in burials: some adults were buried with whole herds of sacrificed sheep and as many as seven sacrificed children. By Classic Kerma times (ca. 1750–1550 BC) a large settlement existed at Kerma (Figure 7.15) and the cemetery contained huge tumuli of kings, which were excavated by George Reisner 1913–1916 (see Box 7-D). During Egypt's Second Intermediate Period, when a small kingdom was located at Thebes, Kerma controlled Nubia, with the Kushite state extending as far south as the Fourth Cataract, which has been demonstrated by recent archaeological survey in this region. According to Egyptian sources, Kush was allied against the Thebans with the Hyksos state in northern Egypt.

Box 7-D Kerma burials

Charles Bonnet has estimated that the Kerma cemetery contained more than 20,000 burials – many more than are known for cemeteries in Egypt. In the southern part of the Kerma cemetery where George Reisner excavated were four huge tumuli (III, IV, X, and XVI) of rulers from Classic Kerma times (ca. 1750–1550 BC) (Figure 7.13).

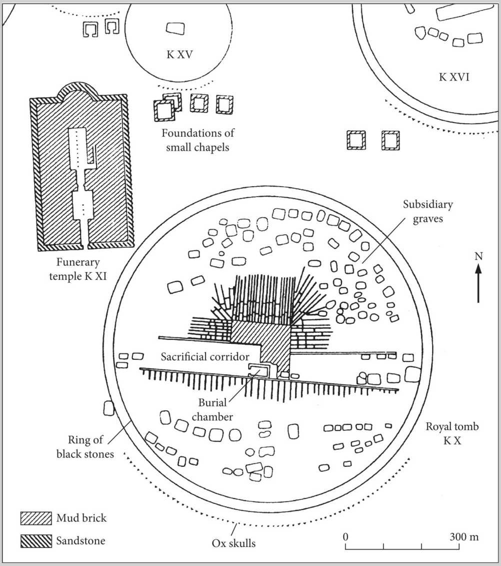

K XV
K XVI
Foundations of small chapels
Subsidiary graves
N
Funerary temple K XI
Sacrificial corridor
Burial chamber
Royal tomb K X
Ring of black stones
Mud brick
Sandstone
Ox skulls
0
300 m

Figure 7.13 Plan of the royal tomb K X and the funerary temple K XI excavated by George Reisner at Kerma.

Source: Timothy Kendall, *Kerma and the Kingdom of Kush, 2500–1500 BC: The Archaeological Discovery of an Ancient Nubian Empire*. Washington, DC: National Museum of African Art, Smithsonian Institution, 1996, p. 63.

Unlike Egyptians, who were buried in an extended position in coffins and sarcophagi, Kerma kings and elite were placed on wooden beds in a contracted position (with the exception of Tumulus X at Kerma, which was a coffin burial). The Kerma royal burials were in low, circular tumuli. Kerma elite were not mummified, but human remains were often well preserved in the extremely dry environment of the region.

While Egyptians wore linen garments, Kerma people were buried in both linen and leather items, including caps. In some burials, mica ornaments in the shape of animals and deities(?) were sewn on the caps. Similar ornaments in ivory were inlaid in some wooden beds. Large amounts of Kerma Ware were placed in burials, and grave goods included toilet articles and items of personal use, such as ostrich feather fans. Males were often buried with short bronze daggers.

The largest Kerma tumulus (K III) was ca. 70 meters in diameter, but only ca. 3–4 meters high. Ox skulls were laid around the tumulus, possibly from a funerary feast. The circular mound was built with parallel walls of mud-brick filled with rubble. The burial chamber, which contained a bed made of glazed quartz, was in the center of the tumulus. Bisecting the structure was a corridor which contained the remains of 12 sacrificed humans (mostly females) and rams. A life-size seated statue of an Egyptian woman named Sennuwy, and part of the statue of her husband Djefaihapy, the nomarch of Asyut during the reign of Senusret I, were also found in the tumulus (see 7.12). Although some Kerma grave goods consisted of Egyptian artifacts that had been robbed from earlier Egyptian graves in Lower Nubia, these statues came from a much greater distance – the nomarch's tomb or a temple in Middle Egypt.

Subsidiary graves were cut into the royal tumuli, probably for servants and other dependents, but also for a few high-status burials. In his analysis of the associated burials, David O'Connor has also noted satellite cemeteries associated with each of the enormous royal tumuli, with burials of different sizes/rank that he thinks belonged to high-status officials, army officers, and priests. Large satellite tumuli may have contained the burials of important royal relatives.

Reisner also excavated two rectangular mud-brick mortuary temples in the southern cemetery, one next to K X and the other near K III. No other structures in the Kerma cemetery are rectangular in design, and O'Connor thinks that these were the type of mortuary structures built in Egypt in the Middle Kingdom, and later built at Kerma by Egyptian architects.

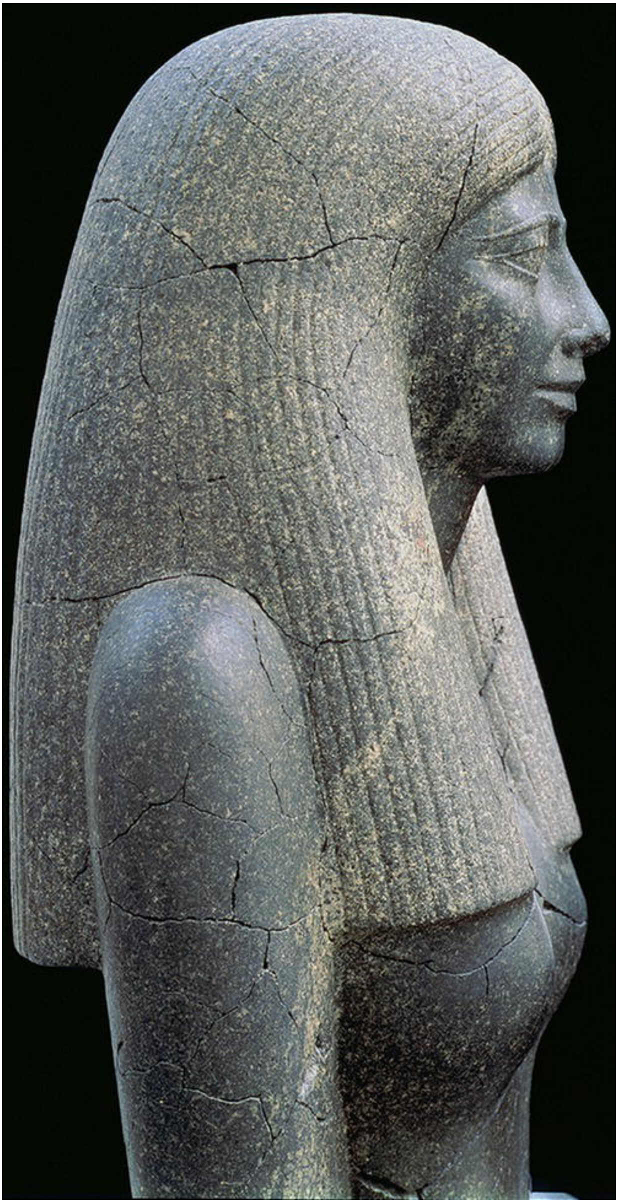


Figure 7.14 12th-Dynasty statue of Lady Sennuwy found in a royal burial (K III) at Kerma by George Reisner.

Source: Museum of Fine Arts, Boston, Massachusetts, USA/Harvard University – Museum of Fine Arts Expedition/The Bridgeman Art Library.

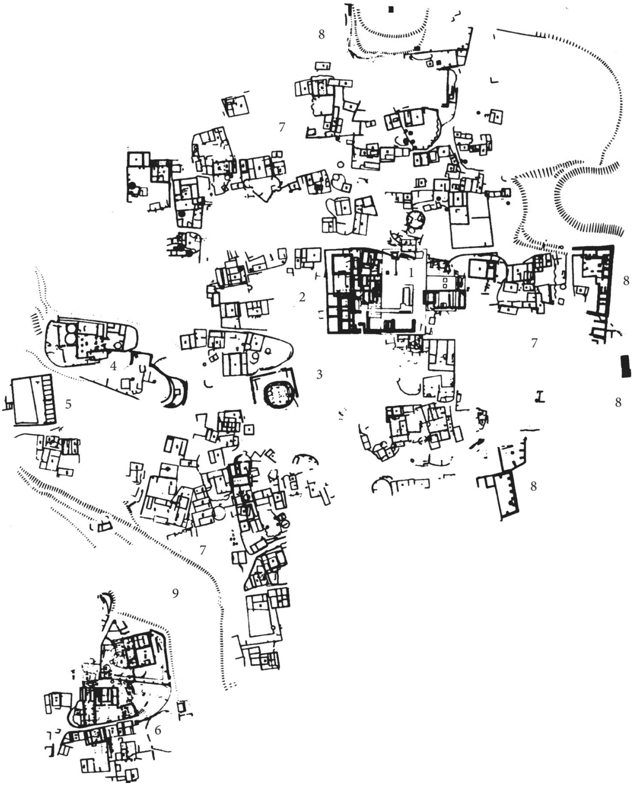


Figure 7.15 Plan of the central city of Kerma, as revealed by excavations completed by Charles Bonnet in 1994. (1) the Lower Deffufa, (2) its temple complex, (3) the round hall, (4) the later palace, (5) its associated warehouse, (6) a group of small shrines, (7) residential areas, (8) exposed parts of the defensive wall, and (9) deep defensive ditches.

Source: Timothy Kendall, *Kerma and the Kingdom of Kush, 2500–1500 BC: The Archaeological Discovery of an Ancient Nubian Empire*. Washington, DC: National Museum of African Art, Smithsonian Institution, 1996, p. 47.

Reisner also excavated a huge mud-brick structure at Kerma, known as the Western Deffufa, which was preserved up to 20 meters in height. Excavations at Kerma since the 1970s by Charles Bonnet and now Matthieu Honegger have demonstrated that this structure was a temple complex with at least 12 building phases. A huge wall 5+ meters thick enclosed the temple, where Reisner found evidence of craft workshops, including bronze production (Figure 7.16). The city center that Bonnet has excavated covered an area of almost 9 hectares, and was surrounded by a defensive wall with a gateway and massive towers, and a 5-meter-deep ditch. Unlike planned state towns of the Egyptian Middle Kingdom, the city of Kerma shows no evidence of town planning. Houses in the city were mostly of mud-brick, with exterior courtyards for cooking, grain storage, and livestock tending. A circular structure made of wood and mud-brick, over 15 meters in diameter, may have been a royal audience hall, and a large palace with massive pillars for the throne room was also located in the city in Classic Kerma times. Along the river there were harbor buildings, including a large residence (palace?) containing storerooms and sealings with Egyptian inscriptions. The seal impressions provide evidence that Egyptians were employed at Kerma, probably as artisans and administrators. Sealings of Hyksos kings of the 15th Dynasty have also been excavated at Kerma, demonstrating extensive connections with northern Egypt, involving trade and possibly political alliance, which are also suggested by the Kerma pottery and Nubian arrowheads excavated at the Hyksos capital of Avaris (Tell el-Dab'a).

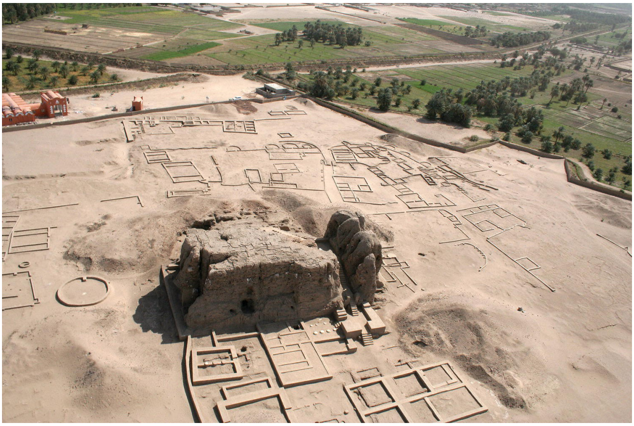


Figure 7.16 View of the Western Deffufa temple at Kerma.

Source: Mission archéologique de l'Université de Neuchâtel au Soudan. Photo Bernard Noel Chagny.

Reisner thought that Kerma was an Egyptian outpost in the Middle Kingdom, controlled at one time by an Egyptian governor, Djefaihapy of Asyut, whose fragmented statue had been found along with that of his wife, Sennuwy, in a Kerma royal tomb (III). But this tomb dates to a later period than the Egyptian statues, which had probably been robbed from a tomb or temple in Middle Egypt, and by Middle Kerma times Kerma was a powerful independent state that arose in competition with Egypt, what neo-evolutionary archaeologists would call a secondary state. The wealth of the Kerma kingdom was based on Nubian gold and probably control of overland trade with Punt and other southern regions. Sherds of a prestige ware called Kerma Ware, a distinctive highly polished black-topped red ware made in the form of thin-walled flaring beakers and bowls, have been excavated by Rodolfo Fattovich (University of Naples "l'Orientale") at Kassala (in the Gash River Delta), in eastern Sudan near the Eritrean border. The Kassala region was probably in the hinterland of Punt, known in Egyptian texts as the source of many exotic raw materials, and Kerma Ware sherds there demonstrate a trade connection with the Kerma culture.

The Second Intermediate Period was also a time of change in Lower Nubia. Kerma gained control of Lower Nubia, probably in alliance with powerful C-Group chiefs or as their overlords. The larger C-Group graves of this period represent the greater wealth of some C-Group individuals, who probably controlled the economy in Lower Nubia more directly than in Middle Kingdom times.

Fortified late C-Group settlements have been excavated, including the site of Areika, which its excavators in the early 20th century thought was a Nubian chief's castle. Josef Wegner's analysis of the Areika evidence, where 30 percent of the ceramics were Egyptian "tablewares" and the rest were C-Group, suggests another interpretation, as a C-Group garrison under the control of Egyptian officers. Some Egyptians also remained in Nubian forts. Stelae from Buhen from this period, which are inscribed in Egyptian hieroglyphs, give Egyptian names of officials who served the king of Kush, and at the Mirgissa fort a Kerma culture cemetery was excavated. Thus the archaeological and textual evidence suggests complex interaction among the different populations living in Lower Nubia in the Second Intermediate

Period – and the political and economic control of the region.

Further complicating the picture are burials of people known as the Pan-Grave culture, and Egyptian texts about the *Medjay*. Pan-Graves, so-called because the burial pits are shallow and round, were first excavated by Flinders Petrie in Upper Egypt at Hu (Hiw) (Figure 7.17). The contracted burials were not mummified, and the grave goods, including rectangular-shaped shell beads and a distinctive Pan-Grave pottery (Black-topped Red Ware with a thick lip), are not typologically Egyptian. Pan-Grave burials, which date to the Second Intermediate Period and early New Kingdom, have been found in Lower Nubia, and in Upper and Middle Egypt. These burials have been interpreted as those of the *Medjay*, who after the Middle Kingdom began to settle in the Nile Valley in Lower Nubia. C-Group and Pan-Grave cemeteries recently excavated at Hierakonpolis are evidence of both of these foreigner groups in southern Egypt in the Second Intermediate Period. Egyptian texts mention *Medjay* as employed in the army of the Theban 17th Dynasty. Later in the early New Kingdom they were used as policemen, and the term *Medjay* remained the word for policeman throughout the New Kingdom. Although there is nothing that directly connects the Pan-Grave burials with the term *Medjay*, the burial evidence seems to fit with what is known about them textually.

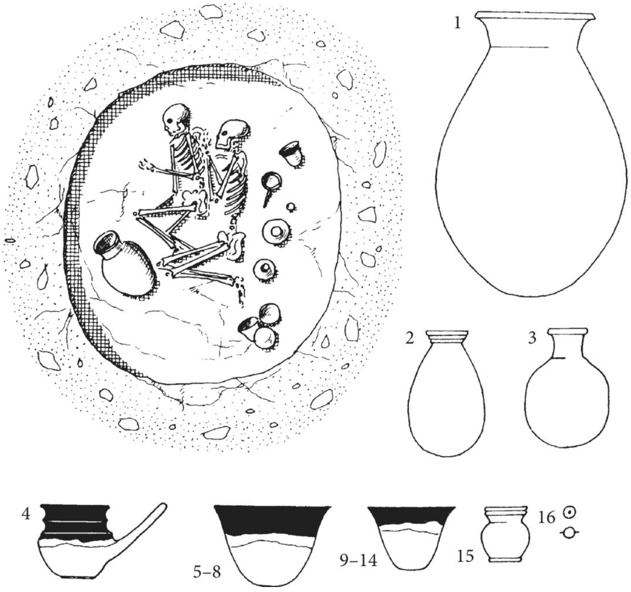


Figure 7.17 Pan-Grave excavated at Abydos. Grave goods: (1) large pink-ware jar, (2) travertine jar, (3) hard drab clay jar, (4) Kerma Ware spouted jar, (5–14) Kerma Ware bowls, (15) travertine cosmetic jar, and (16) 19 spherical blue faïence beads.

Source: Walter B. Emery, *Lost Land Emerging*. New York: Scribner, 1967, p. 182.

7.13 The Theban State during the Second Intermediate Period

Although historians have identified the 15th and 16th Dynasties as Hyksos, Danish Egyptologist Kim Ryholt's analysis of kings from this period listed in the Turin Canon places the 16th Dynasty in Thebes. These kings may have been the predecessors of the kings of the 17th Dynasty, who are well attested in Theban inscriptions. At Dra Abu el-Naga in Western Thebes, Daniel Polz of the German Archaeological Institute, Cairo, has excavated the small mud-brick pyramid of a 17th-Dynasty king, Intef VII. Two small obelisks of this king that were discovered by Auguste Mariette in 1860 probably came from this pyramid complex.

Ryholt also proposed the existence of a short-lived dynasty centered at Abydos (ca. 1650–1600 BC), based on textual evidence. This theory has recently been confirmed by excavations of Josef Wegner (University of Pennsylvania) at Abydos, where the tomb of a king named Senebkay and another unnamed king have recently been uncovered.

Archaeological evidence from this period is also known elsewhere in Upper Egypt. At Edfu, a nome capital in southern Egypt (see 6.13), Nadine Moeller has excavated a court with 18 circular grain silos which dates to the Second Intermediate Period. Some of these silos were built over an earlier columned hall from an administrative complex of the late Middle Kingdom, but with no large centralized state in the 17th Dynasty, the town of Edfu had its own reserve of grain.

In 1900 George Reisner, directing the Hearst Expedition, excavated a late Second Intermediate palace complex at Deir el-Ballas in Upper Egypt, and in the 1980s the complex was re-examined by Peter Lacovara (Carlos Museum, Emory University). The largest structure excavated there was the "North Palace" surrounded by an enclosure wall, ca. 300 × 150 meters, with a nearby court which contained two granaries and a bakery. A royal residence, the North Palace was originally decorated with wall paintings (including a scene of soldiers carrying battleaxes), faïence tiles, and gold leaf – all of which were found in fragments there. Three large houses to the west of the palace were also decorated with wall paintings. Clusters of other houses of varying sizes were also excavated and camps may have existed on the periphery, but not all of the domestic areas have been excavated. According to Lacovara, a possible workmen's village consisting of small houses with contiguous walls was located on the northern side of the "South Hill"; ca. 35 houses were excavated there by the Hearst Expedition and possibly more are located in the unexcavated area to the east. In the "South Wadi" area a possible administrative complex, laid out orthogonally, seems to be similar to the official quarter structures and long narrow storerooms in the central city at Amarna (see Figure 8.5). In terms of dating the Deir el-Ballas site, the archaeological and inscriptional evidence, including a lintel found in the nearby village with the name of the late 17th Dynasty king Taa, indicates that it was a "campaign palace" used by the Theban kings as they expanded their kingdom northward to conquer the Hyksos. It was abandoned in the early

18th Dynasty, by which time the Egyptian kingdom controlled all of Egypt. In the Wadi el-Hol, an overland Western Desert route between Thebes and Hu in Upper Egypt, and another route to Kharga Oasis, John and Deborah Darnell (the Theban Desert Survey, Yale University) have found evidence of fortified towers, which can be dated by associated 17th-Dynasty sealings. Both Kerma Ware and C-Group pottery have been excavated at these towers, providing evidence of Nubian soldiers employed there by the Theban kingdom. An earlier script carved on rock in the Wadi el-Hol, which John Darnell dates to the reign of Amenemhat III and the 13th Dynasty, was used to write a West Semitic language. Darnell has proposed that this is the earliest known alphabetic writing (earlier than the Serabit Proto-Sinaitic inscriptions; see 7.9), an invention that may have been the result of interaction between Egyptian scribes and soldiers from southwest Asia who were in the service of the Egyptian army during the late Middle Kingdom.

More recently at the site of Umm el-Mawagir in Kharga Oasis the Yale expedition has found a large site (ca. 88 hectares) with mud-brick buildings, including an administrative complex and a large bakery – with an estimated half-ton of ceramic bread molds – dating to the Second Intermediate Period. The site was located along a major trade route from the Theban kingdom in southern Egypt southward into Sudan and several thousand people may have lived there. According to John Darnell, with Thebes extending its control to the desert caravan routes to the west, the polity may have gained an advantage against the Hyksos in northern Egypt. War with the Hyksos is first known from the reign of (Seqenenra) Taa, whose mummy demonstrates a violent death, with an ax cut on his forehead (in addition to dagger cuts). Texts from the reign of Taa's successor Kamose, the last king of the 17th Dynasty, place the boundary with the Hyksos kingdom in Middle Egypt at Cusae. This king began the reconquest and reoccupation of Nubia, and two Theban stelae describe his campaign northward against the Hyksos.

Ahmose I, Kamose's successor and the first king of the 18th Dynasty, finally conquered the Hyksos capital at Avaris. He continued campaigning in southwest Asia, and then fought Nubian bowmen below the Second Cataract, which are described in a detailed biographical text at the Elkab tomb of Ahmose, son of Ibana. It was Ahmose I who began the Egyptian palace at Avaris, symbolically built on the site of the earlier Hyksos fortress (see 7.11). Beginning with the reigns of Taa and Kamose, the conquest of the Hyksos was not completed until ca. year 18 of Ahmose's reign – with the expulsion of the Hyksos rulers taking over 20 years to succeed.

Chapter 8

The New Kingdom

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Introduction

The defeat of the Hyksos and the Kerma kingdom in the early New Kingdom led to greatly expanded Egyptian control of foreign regions to the northeast and farther south

– through warfare. The 18th and 19th Dynasties were the age of Egypt’s empire, and in Nubia temple towns were founded as far upstream as the Fourth Cataract. It was a cosmopolitan age with much trade and exchange between the major states in the Near East and Aegean, and opulence is apparent, especially in royal and elite burials in western Thebes. The pyramid as a royal tomb disappeared by the New Kingdom, however, and kings were buried in hidden rock-cut tombs in the Valley of the Kings.

Beginning in the 18th Dynasty cult temples were built mainly in stone (and added onto). A major beneficiary of Egyptian conquests was the Temple of Amen-Ra at Karnak. Huge royal mortuary temples were also built across the river in western Thebes.

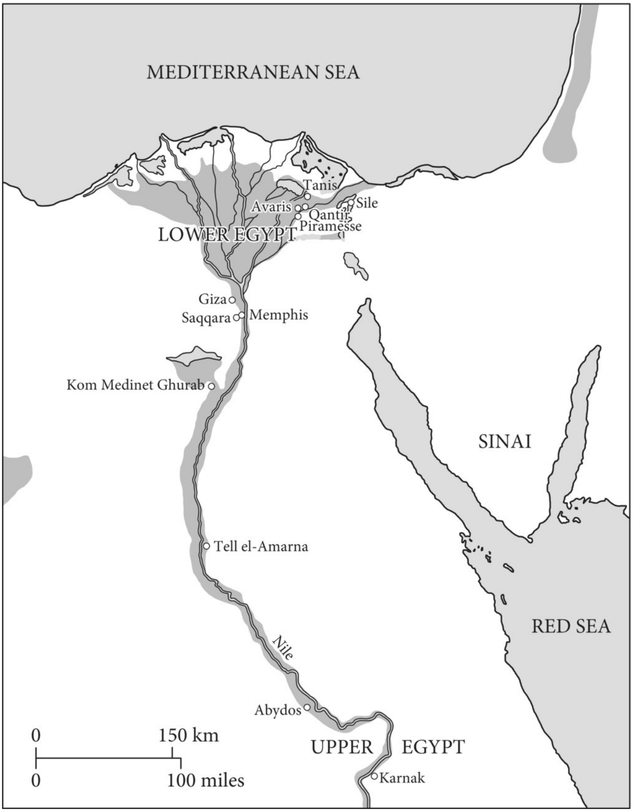
The well-preserved town at Deir el-Medina, for workers in the royal tombs and their families, has provided important settlement data, as has Akhenaten’s briefly occupied capital at Tell el-Amarna. Akhenaten’s focus on the cult of the god Aten produced the so-called Amarna revolution, but his wide-ranging reforms scarcely outlived his reign. His successor, Tutankhamen, abandoned Amarna and was buried in Thebes, in a small but lavishly furnished tomb.

Although the great pharaoh Rameses II fought the Hittites, the other superpower of the time, at Qadesh in Syria, and later concluded a peace treaty with them, in the 20th Dynasty Egypt lost its empire in southwest Asia. The 20th-Dynasty kings, all but one of whom were named Rameses, continued to be buried in the Valley of the Kings, but at the end of this dynasty most of the Theban royal tombs were robbed. The New Kingdom was succeeded by a dynasty of kings of uncertain ancestry ruling at Tanis in the northeastern Delta, and a kind of theocratic state at Thebes.

8.1 The New Kingdom: Overview

Although warfare with the Hyksos began no later than Kamose, the last king of the Theban 17th Dynasty, it was Ahmose, the founder of Manetho’s 18th Dynasty, who defeated the Hyksos in northern Egypt and followed them into southern Palestine, where he laid siege to their fortress of Sharuhen. Ahmose also campaigned in Nubia against the Kerma state, as did his successor Amenhotep I. At South Abydos in the vicinity of the huge complex of Senusret III (12th Dynasty; see 7.5), Ahmose erected several monuments, including a large pyramid and mortuary temple complex, to the west of which was a smaller pyramid shrine for his grandmother Tetisheri. But the king's rock-cut tomb was located farther west at the foot of the limestone cliff.

The early 18th Dynasty was a time of consolidation of power and the re-establishment of Egyptian kingship. The seat of government was moved to the north at Memphis, but little urban architecture has survived from Memphis or other New Kingdom cities (with the exception of Tell el-Amarna in Middle Egypt). Although temples (and their towns) were built throughout Egypt, no major New Kingdom temple north of Abydos has been preserved, with parts of these temples reused in later structures. This also must have occurred in southern Egypt, where a number of temples were probably destroyed to make way for bigger Greco-Roman ones (see 10.5).


MEDITERRANEAN SEA
Tanis
Sile
Avaris
Qantir
Piramesse
LOWER EGYPT
Giza
Saqqara
Memphis
Kom Medinet Ghurab
SINAI
Tell el-Amarna
RED SEA
Nile
Abydos
0
150 km
0
100 miles
UPPER EGYPT
Karnak

Map 8.1 Major New Kingdom sites in Egypt.

The major surviving temples from the New Kingdom are located at Karnak and Luxor, the cults of which were central to the ideology of kingship. At Karnak Amenhotep I renewed a program of royal construction – in what would become the largest cult center in Egypt for the next 1,500+ years. Although the location of his tomb is uncertain, Amenhotep may have been the first king of the New Kingdom to build a separate mortuary temple – a practice that most kings of the period would follow. Reliefs from this temple have been found near Dra Abu el-Naga in western Thebes.

Thutmose I, of unknown parentage, succeeded Amenhotep I and was the father of (the future ruler) Hatshepsut. With his military activity in Nubia the Kerma state was finally ended, and Thutmose I then took his army northward to Syria-Palestine. New to the Egyptian army in the New Kingdom were the horse and chariot, introduced into Egypt under the Hyksos. Although Nubia would remain in Egyptian control through the New Kingdom, control of the petty states in Syria-Palestine and confrontation with the larger states to the north and west would prove more problematic. As a result, a trained full-time army was maintained, with a professional management that was capable of organizing and supplying major campaigns abroad, where garrisons also had to be maintained. There were also army reservists who could be mobilized when needed, and after their service veterans were often given farms in Egypt or positions on royal estates. These and other rewards helped to promote loyalty to the king, as did the ideology of the king as war leader. The heir to the throne was often the commander-in-chief of the army in the king's name, but to secure the line of succession other royal sons were often excluded from positions of power in the army or government.

Thutmose I is the first king of the New Kingdom with a known tomb in the Valley of the Kings. Construction of pyramids for the royal tomb had ended, and for increased security the locations of the New Kingdom royal tombs were intentionally hidden. Thutmose I also built a mortuary temple in western Thebes, known only from mention in texts.

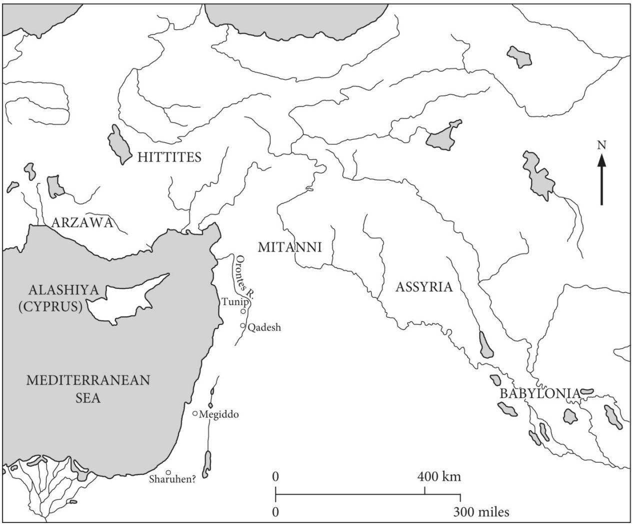
During the New Kingdom the "Festival of the Valley" was held yearly, when the royal mortuary temples were visited by priests carrying the shrouded portable statue of Amen from his sanctuary at Karnak on a model ship. Through homage to the ancestral line of kings, integrated with the cult of Amen, the festival reinforced the central role of Egyptian kingship. It also provided the occasion to honor the non-royal dead buried in western Thebes by participants who made offerings and banquets for their dead ancestors, ideologically linking the god's cult, kingship, and state officials – in life and in death.

Royal women became increasingly important in the 18th Dynasty, as did the office of "God's Wife of Amen," which Hatshepsut held. Following the probably brief reign of Thutmose II, Hatshepsut, who was his half-sister and wife, became regent for her stepson and nephew Thutmose III (the son of a secondary wife of Thutmose II). Hatshepsut, however, took on the trappings of king and ruler. Her reign was not one of major military campaigns – which reached new heights when Thutmose III became sole ruler –

and she built many monuments in Egypt and Nubia. While most of her constructions at Karnak were obliterated by later kings, Hatshepsut's well-known temple at Deir el-Bahri, where a seafaring expedition to Punt was recorded, is the first well-preserved royal mortuary temple of the New Kingdom.

Thutmose III's 17 military campaigns in Syria-Palestine included a long siege of the fortified town of Megiddo. His lists of conquered peoples (of the north and south) are on Karnak's Sixth Pylon, with a schematized scene of the king smiting these enemies on the Seventh Pylon. Texts known as the "Annals of Thutmose III," describing his campaigns, were carved on walls surrounding the bark shrine at Karnak (for the cult statue which was carried in processions on a model bark). As a result of his conquests, Egypt controlled Palestine and parts of southern Syria, as well as major trade routes in the eastern Mediterranean. Egypt's chief rivals were the kingdom of Mitanni in northwest Syria, and the city-states of Qadesh and Tunip, on the middle and lower Orontes River, respectively. The coalition centered on Qadesh was defeated in Year 42 of Thutmose's reign. Children of subjugated foreign chiefs and princes were sent to Egypt to be educated, which helped maintain control of these regions, as did Thutmose's marriages to Asiatic royal women.

As a result of ideological reciprocity between the king and the god Amen, who was believed to confer Egyptian military success abroad, the Temple of Karnak greatly benefited from foreign tribute, trade, and war booty. Thutmose III's Festival Hall is the largest of several monuments that he erected there. In western Thebes, he built a temple to Amen at Medinet Habu (begun under Hatshepsut) and a small temple at Deir el-Bahri above those of Mentuhotep II and Hatshepsut. Thutmose III's mortuary temple is located at Sheik Abd el-Qurna and his large tomb is in the Valley of the Kings. Monuments were also built at a number of other temples in Egypt during his reign, and in Nubia as far upstream as Gebel Barkal below the Fourth Cataract (with the actual frontier farther upstream at Kurgus, near the Fifth Cataract).



Map 8.2 Kingdoms and city-states in southwest Asia during the Late Bronze Age (New Kingdom).

At the former Hyksos capital of Avaris (see 7.11), a large palace was built and decorated during the reigns of Hatshepsut/Thutmose III and Amenhotep II where fragments of Minoan-style frescoes have been excavated. Military campaigns in southwest Asia continued under Amenhotep II, but the campaigns of his successor, Thutmose IV, were brief. Both kings actively constructed monuments throughout Egypt, including Amenhotep's temple and stela at the Giza Sphinx, and Thutmose's "Dream Stela" between the paws of the Sphinx (see 6.5).

Foreign conquests required not only military control but also civil organization, under the offices of "Governors of Northern Lands," and the "Governor of Southern Lands"/"King's Son of Kush." In Egypt the government was organized under the Northern Vizier and the Southern Vizier. Offices of the (two) "Overseer of the Treasury," "Overseer of the Granaries of Upper and Lower Egypt," and "Overseer of Cattle" were involved with the economic life of the state and were responsible for collecting and storing taxes, paid in grain, cattle, and other products, and corvée labor. There were mayors at Memphis and Thebes, the two major centers of the kingdom, and also mayors at nome centers and some larger towns. Mainly judicial in function for both civil and criminal cases, *kenbet* councils existed throughout the country, with two "great" councils in Memphis and Thebes. The *Medjay*, not the army, operated as local police in Egypt. At the royal court a chancellor and chamberlain directed operations, and a chief steward oversaw the royal estates/lands. Although the king is depicted in temple reliefs as the sole person before the gods, there were two major religious offices: the high priest of Amen and the high priest of other gods.

With the long reign of Amenhotep III an unprecedented era of wealth and prosperity is evident – at least for the elite who had richly decorated tombs located in western Thebes and the Memphis region. One military campaign took place in desert regions to the east of Nubia, but relations with Near Eastern polities were through diplomacy (including a treaty with Mitanni), royal marriages to foreign princesses, and a kind of elaborate gift exchange.

In control of vast resources, Amenhotep III constructed monuments throughout Egypt and Nubia as far south as Gebel Barkal. His temple at Soleb, above the Third Cataract, is one of the finest in Nubia. To the south at Sedeinga, a smaller temple was dedicated to Amenhotep's chief wife Tiy.

Amenhotep III's major surviving works in Egypt are concentrated at Thebes. On the east bank at Luxor he dismantled an earlier 18th-Dynasty temple and constructed a large temple in sandstone (to which Rameses II later added a peristyle court and pylon). At Karnak Amenhotep built the temple of Mut to the south of the Amen temple, and another temple to the north that was later dedicated to the god Montu. The main temple was enlarged, creating a new entrance, the Third Pylon, from which the procession of the Opet Festival began. This was a yearly festival in which the barks of Amen and the king, along with the barks of Mut and Khonsu, were taken from Karnak to Luxor. Taking place during the flood season, this festival was associated with the Nile's fertility. The festival, which reaffirmed the ruler's earthly role as king and his cosmic role as son of Amen-Ra, is depicted in reliefs showing dancers and musicians in much merry-making.

In western Thebes Amenhotep III built a large palace complex at Malkata, next to which an enormous harbor was excavated. Except for the two huge seated statues of the king, known as the Colossi of Memnon, little remains standing of his mortuary temple which originally contained hundreds of statues (Figure 8.1). His tomb was built in the western part of the Valley of the Kings. The importance of Amenhotep's chief wife Tiy is seen on a number of his monuments, and she continued to be a significant force in the early reign of her son Amenhotep IV.

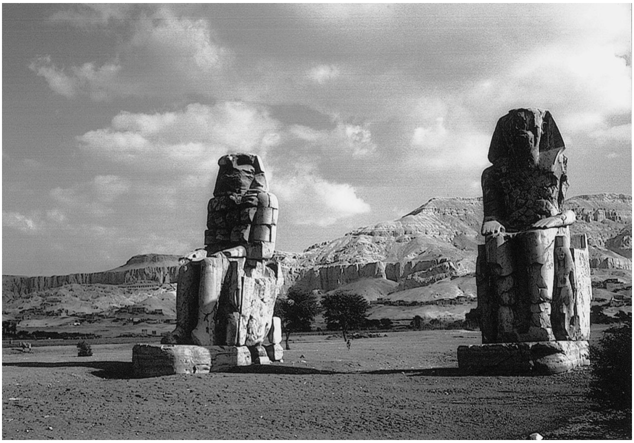


Figure 8.1 The Colossi of Memnon.

In his early years as king, Amenhotep IV erected four shrines to an obscure solar deity, Aten, at East Karnak, the cult center of Amen-Ra. Subsequently, the king changed his name to Akhenaten, which means "Beneficial for Aten," and moved his capital to a site in Middle Egypt, now known as Tell el-Amarna. Akhetaten ("horizon of Aten") became the cult center for this deity, with Akhenaten's sole focus on the worship of Aten, whose son was the king. The well-preserved city contained large temples to Aten, as well as palaces, residences of elite and artisans, a workmen's village, and tombs carved in the eastern cliffs. During the brief time that Akhetaten was occupied, major changes also occurred in temple architecture, art styles and subject matter, language use (Late Egyptian; see 2.2), and the mortuary cult – probably the greatest indication of Akhenaten's theological revolution.

During the Amarna Period the cults of other deities were ignored, which meant that they were cut off from royal/state support, and this had serious economic repercussions throughout Egypt, especially at Thebes. Turning against the Amen cult, Akhenaten later ordered that the name of the deity be hacked off monuments. But with Akhenaten's death, his religious revolution ended.

Most historical reconstructions place at least one ruler between Akhenaten and Tutankhamen, whose name was changed (from Tutankhaten) when the Amarna Period ended. One of Akhenaten's daughters by his chief wife Nefertiti, who also featured prominently in the Aten cult, married the child king Tutankhaten, probably Akhenaten's son by another wife.

Early in his reign, this king returned to Memphis, and the powerful cult of Amen-Ra once again became the major focus of state religion. Akhetaten was abandoned by the court, and Akhenaten's monuments were later dismantled or defaced by royal agents. Tutankhamen died at about age 18, and was buried in a small but lavishly furnished tomb in the Valley of the Kings. Ay, possibly a brother of Akhenaten's mother, Queen Tiy, briefly became king, and the 18th Dynasty ended with the reign of Horemheb, a general who had also been regent for Tutankhamen.

Rameses I, the first king of the 19th Dynasty, was Horemheb's vizier and a military commander, but was not of royal birth. He ruled for a little more than a year, followed by his son Sety I. Major building programs were undertaken at the important cult centers, especially Karnak, where work continued on the huge Hypostyle Hall, begun under Horemheb. At Abydos Sety constructed a large temple for the god Osiris and the principal deities of the land. The king list carved in this temple, which does not include Hatshepsut, Akhenaten, Tutankhamen, and Ay, is a major source of information for the kings from the 1st Dynasty up to Sety I's reign (see 2.9).

Sety I's son Rameses II was the second longest reigning king in ancient Egypt (67 years) – a major reason that so many of his monuments are found throughout Egypt. (He also usurped cartouches of earlier kings on their monuments.) At Karnak Rameses completed the enormous Hypostyle Hall, and built an entrance quay on the west that was connected to the Nile. At Luxor he added a large forecourt and pylon to Amenhotep III's temple. In Nubia, Rameses's most impressive monument is the pair of rock-cut temples of Abu Simbel.

Both Sety I and Rameses II campaigned in Syria-Palestine and Nubia, while Libyan tribes began to be a problem to the northwest. With renovated Middle Kingdom forts and settled populations living in temple towns, Nubian campaigns were to secure mining areas (especially for gold) and quell indigenous rebellions. The Egyptians also raided areas beyond their control farther south. Nubians were drafted into the Egyptian army (and served abroad), and some were taken as slaves. Chiefs' sons were sent to Egypt. Living in Egyptian temple towns, some Nubians became acculturated – and by the end of the 18th Dynasty the indigenous C-Group culture had disappeared. Centered on cult temples, the Nubian towns housed government officials, temple priests and personnel, and military personnel (although evidence of settlements has not been found around all temples). Nubian administration was organized into two major regions: Wawat in the north and Kush in the south, with provincial capitals at Aniba and Amara.

Some temples in Egypt had land and trading rights in Nubia, granted to them by the crown, thus both state and temple exploited Nubia economically in the New Kingdom – for its mines and quarries, and trade of costly raw materials which passed through Nubia from Punt and regions to the south. Decorated with pharaonic reliefs and inscriptions, the monumental stone temples in Nubia were impressive symbols of Egyptian power – and deterrents to local people – in an effort to control the region ideologically.

In Syria-Palestine, more formidable military efforts were needed than in Nubia, and support of Egyptian armies that were sometimes sent there would have required large-scale logistics. Both Sety I and Rameses II fought the other major power, the Hittites, in Syria. Although Rameses depicted his victory over the Hittites at Qadesh on his major monuments, the king barely managed to escape his foe's forces. The battle was not a decisive victory for either side, and territory fought for by the Egyptians remained in Hittite control. Seventeen years after the Battle of Qadesh a later Hittite king, Hattusili III, facing conflict with the Assyrians, concluded a peace treaty with the Egyptians – actually a kind of non-aggression pact.

In the northeast Delta at Qantir, Rameses founded a new capital, Piramesse, which was closer to Egypt's border fortress at Sile and the problematic vassal states in Syria-Palestine. During the 21st Dynasty many of the stone monuments in Rameses's city were removed, and reused when the capital was relocated to Tanis. Although the monuments were missing at Qantir, German archaeologist Edgar Pusch has found evidence of stables, and a chariot garrison at the site is known from texts. Also excavated at the site is evidence of a huge bronze production facility, where Hittite workmen and Egyptians made Hittite-type shields (after Rameses's battle at Qadesh).

Both Sety I and Rameses II were buried in impressive tombs in the Valley of the Kings, and the beautifully decorated tomb of Rameses's chief wife Nefertari is in the Valley of the Queens. An enormous tomb (KV 5) was also prepared for sons of Rameses II: with a number of wives, this king fathered over 100 offspring. Rameses II's fallen colossal statue in granite, at his mortuary temple in western Thebes, the Ramesseum, provided the subject for Percy Bysshe Shelley's poem "Ozymandias," a corruption through Greek of the king's prenomen "User-ma'at-Ra."

Because of Rameses II's very long life, he outlived 12 elder sons, and was finally succeeded by his son Merenptah, who was probably quite old by then. After Merenptah, three other kings ruled briefly, and the 19th Dynasty ended with the reign of a female ruler, Tausret. This queen was the chief wife of Sety II and became regent for her step-son Saptah, whose mummy has one shortened leg – perhaps the result of polio. Tausret outlived Saptah to become sole ruler for only two years.

The village of Deir el-Medina in western Thebes, which housed the workers who built and decorated the royal tombs, was founded in the early 18th Dynasty and occupied throughout the New Kingdom (except during Akhenaten's reign). Although some houses existed outside the settlement, most of the workers lived with their families inside the walled village. Several shrines and two cemeteries were also located outside the settlement. The planned village was densely populated, with typical houses consisting of four to six rooms, with a small open court for cooking in the back. A staircase led to the roof area, which was also utilized. All of the villagers' needs were provided by the state: food, water, firewood, other raw materials, and tools for their work. During the 20th Dynasty, the earliest known strike was recorded (the Turin Strike Papyrus) when tomb workers from the village refused to go to work because they had not received their rations.

The 20th Dynasty, which began with the short reign of Sethnakht followed by the reigns of nine kings named Rameses (III through XI), was a time of major problems both at home and abroad. The tomb workers' strike occurred near the end of the reign of Rameses III, who also foiled an assassination conspiracy originating in his harem. Rameses III faced several invasions of foreigners and by the end of his reign Egypt no longer had a large empire in Syria-Palestine. The king won major battles against the Libyans in regnal Years 5 and 11, and in Year 8 he fought off a coalition of "Sea Peoples." These peoples were part of a large migration of displaced groups moving in the eastern Mediterranean later in the 13th century BC, which had caused the collapse of a number of Late Bronze Age states. The Sea Peoples, together with Libyans, had also threatened Egypt during Merenptah's reign. Different groups of Sea Peoples are named on the reliefs of Rameses III's mortuary temple at Medinet Habu, including the Peleset, from which the name of the place where they settled, "Palestine," is derived.

Increasingly in the 20th Dynasty sources of royal income became directly controlled by temples, including land, foreign trade, and mining and quarrying expeditions. The Great Harris Papyrus in the British Museum, which is about 40 meters long, lists Rameses III's donations to Egyptian temples. This papyrus demonstrates the great amount of land owned by temples (about one-third of all cultivable land), especially the Temple of Amen at Karnak. The Wilbour Papyrus (reign of Rameses V) is informative about temple-owned land in Middle Egypt that was rented out to different people, providing a direct source of temple income.

Economic problems in Egypt included inflation in the later 20th Dynasty, especially of the value of emmer wheat and barley in relation to units of copper and silver, as documented by Egyptologist J. J. Janssen. From the reign of Rameses IX there is documentation of trials of tomb robbers, demonstrating a breakdown of sociopolitical control. Although tomb robbing took place in all periods, such records are exceptional. At the end of the dynasty there was a famine and Thebes was troubled by marauding Libyans. Thefts from temples and palaces also occurred then. The Theban royal tombs began to be robbed, and the royal mummies, stripped of their precious ornaments, were subsequently reburied in two locations: a tomb near Deir el-Bahri, and in side chambers of the tomb of Amenhotep II – where they were found in the late 19th century.

Civil war broke out between the high priest of Amen and the viceroy of Nubia, which was finally quelled by Rameses XI's army under General Piankh, who may later have assumed the roles of vizier and viceroy of Kush and high priest of Amen at Thebes. With Rameses XI's death, Piankh's son-in-law and heir, Hrihor, also took the royal titles, while a king named Smendes ruled in the north. Thus, the New Kingdom ended with divided control of Egypt.

The Early New Kingdom

8.2 Early New Kingdom Architecture: Ahmose's Abydos Pyramid Complex, the Thutmosid Palace and Harbor at Tell el-Daba, and the Theban Mortuary Temples of Hatshepsut and Thutmose III

In the New Kingdom Abydos was once again an important cult center. As the ruler of a reunified Egypt, Ahmose chose Abydos for a monument which associates him with the god Osiris, and as a commemorative site for females of the royal family. Beginning in 1993, Stephen Harvey has been excavating in South Abydos where Ahmose's monuments were constructed. The site was first investigated in 1898 by the Egypt Exploration Society when Ahmose's pyramid was found by Arthur Mace. In 1902 Charles Currelly located a terraced temple over 1 kilometer away from the pyramid, as well as a small mud-brick shrine for the king's grandmother Tetisheri, a subterranean shaft tomb, and a town and small cemetery.

Ahmose's pyramid is now a mound of sand and stone debris, ca. 80 × 80 meters and 10 meters high. Many fragments of reliefs were found that originally decorated the pyramid temple. Some of these are from battle scenes with Asiatics (with the earliest known images of horses) – probably depicting Ahmose's victory over the Hyksos. Harvey also located a previously unknown temple dedicated to Ahmose's chief wife, Queen Ahmose-Nefertari. Excavations of the town, where temple priests, personnel, and workmen probably lived, have uncovered evidence of bakeries, which fed the workers. A huge wall ca. 90 × 60 meters which surrounded the town was located with a magnetometer, an on-ground remote sensing device used to locate buried archaeological remains.

At the site of the earlier Hyksos capital of Avaris (Tell el-Daba) there is evidence from the early 18th Dynasty of a military base with camps for Egyptian soldiers and associated storerooms, including large granaries. Also associated with this occupation are pit burials of horses and young males – soldiers who died at the camp, including some Nubians in the Egyptian army, identified by the presence of Kerma domestic wares. A large walled palace complex of the early 18th Dynasty (probably from the joint reign of Hatshepsut and Thutmose III) has also been excavated there by Manfred Bietak. Covering an area of ca. 5 hectares, the complex consisted of three palaces (F, G, J), a large court, a large villa to the east of the largest palace (G), and a complex of storerooms to the south of Palace F. In the (ancient) dumps of Palace F fragments of frescoes on polished lime plaster, an Aegean technique, have been found and pieced together, revealing Minoan-style designs and motifs, such as acrobats leaping on bulls. The larger Palace G (160.6 × 79.2 meters), where some fragments of Minoan-style frescoes were also found, was built on top of a 7-meter high podium. This palace was entered via a ramp leading into a large columned courtyard, behind which were a columned portico and vestibule. In the palace's interior were a columned throne room, a possible sanctuary, and the private quarters – which included two apartments and a toilet.

Bietak has also found evidence at Tell el-Daba of two large harbors. Harbor 1 (ca. 450 × 400 meters), located next to the city of Avaris, was in use during the Middle Kingdom and Second Intermediate Period. To the south, Harbor 2 was located next to the Hyksos palace. Both harbors continued to be used throughout the 18th and 19th Dynasties, and Bietak has identified the site as that of Perunefer, the principal naval base of the New Kingdom.

The only well-preserved royal mortuary temple of the early 18th Dynasty is that of Queen Hatshepsut at Deir el-Bahri, which had associations with the goddess Hathor (Figure 8.2 and Plate 8.1). Built next to and strongly influenced by the temple of the 11th-Dynasty king Mentuhotep II (see 7.3), who reunified Egypt to found the Middle Kingdom, Hatshepsut's temple takes full advantage of its spectacular natural setting in a semicircular bay in the cliffs. Investigations were first conducted there by Auguste Mariette, and from 1893 to 1904 by Édouard Naville (for the Egypt Exploration Fund), who, working with Howard Carter, recorded the temple's reliefs and architecture, extensively published in seven volumes. Since 1961 the Polish Centre of Mediterranean Archaeology (of Warsaw University) in Cairo has been restoring and recording the temple architecture, painted reliefs, and inscriptions.

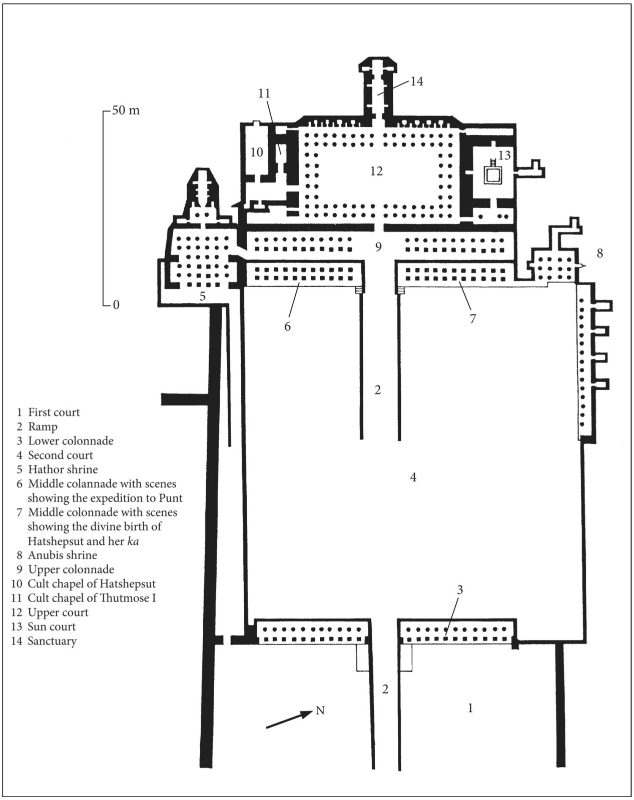

50 m
0
14
11
10
12
13
9
8
5
6
7
2
4
3
2
1
N
1 First court
2 Ramp
3 Lower colonnade
4 Second court
5 Hathor shrine
6 Middle colannade with scenes showing the expedition to Punt
7 Middle colonnade with scenes showing the divine birth of Hatshepsut and her *ka*
8 Anubis shrine
9 Upper colonnade
10 Cult chapel of Hatshepsut
11 Cult chapel of Thutmose I
12 Upper court
13 Sun court
14 Sanctuary

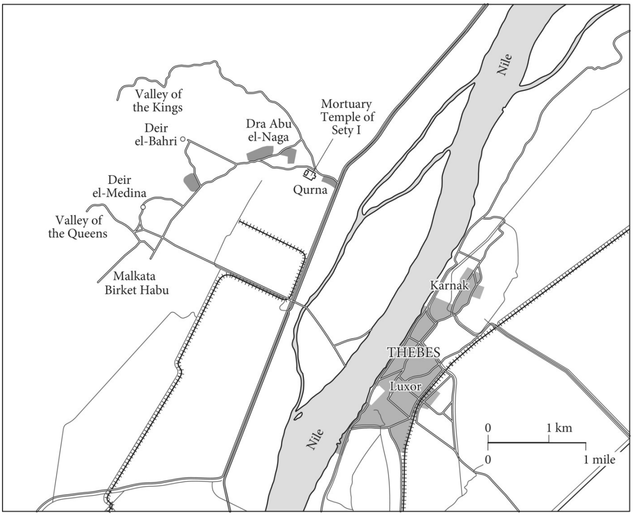
Figure 8.2 Plan of Hatshepsut's mortuary temple at Deir el-Bahri.

> Source: Gay Robins, *The Art of Ancient Egypt*. London: British Museum Press, 1997, p. 126. Used by permissions of the Trustees of the British Museum.

Originally connected by a causeway to a valley temple, now lost, is a walled lower court with a western colonnade. From this a ramp leads to the second level with the temple's large second court. A second ramp then leads to the third level, with an upper colonnade, pillared upper court, and sanctuary, which was modified in Ptolemaic times. The sanctuary contained a stand for the bark of Amen-Ra, which was brought there during the Festival of the Valley. Shrines include those to Hathor, Anubis, and Amen, and an open solar court. Temple mortuary chapels were dedicated to Hatshepsut and her father Thutmose I. On the north side of the middle colonnade are reliefs of Hatshepsut's divine birth, which, as inscriptions indicate, legitimized her rule. As king, Hatshepsut is depicted in most of the temple's reliefs and statues as a male. Intentional destruction of the king/queen's cartouche, inscriptions, and statues occurred after her death, when Thutmose III finally reigned by himself.

The famous Punt reliefs are on the south side of the middle colonnade (Plate 8.2). The composition depicts the successful Punt expedition, of which Hatshepsut was undoubtedly proud, including the seafaring journey there and back. Scenes in Punt show indigenous houses, animals, and people, including the "Chief of Punt, Parahu" and his very heavy wife. Gold ingots and other raw materials of Punt are given to the Egyptian soldiers/sailors, who also return to Egypt with live incense trees carried on shipboard in pots. The logistics required to traverse the Eastern Desert, navigate the Red Sea, and return to Thebes, while supplying food and fresh water for the humans (and trees), makes this expedition a truly remarkable feat (see Box 7-A).

Senenmut, the official (and probable architect) who oversaw the construction of Hatshepsut's magnificent temple, built a chapel overlooking the temple and a tomb beneath the temple's first court. Perched on the rock above Hatshepsut's temple is a similar though smaller temple built by Thutmose III, with three levels with colonnades reached by ramps. The temple was destroyed by a landslide in the late New Kingdom, and much of what remained was removed for reuse in other monuments. It was discovered by the Polish archaeologists in 1962, and they have reconstructed temple scenes from the remaining fragments of painted relief, now in the Luxor Museum. Thutmose III also built a mortuary temple within the floodplain to the southeast of the Deir el-Bahri temples, but not much remains of this temple.


Nile
Valley of
the Kings
Deir
el-Bahri
Dra Abu
el-Naga
Mortuary
Temple of
Sety I
Qurna
Deir
el-Medina
Valley of
the Queens
Malkata
Birket Habu
Karnak
THEBES
Luxor
Nile
0
1 km
0
1 mile

Map 8.3 Map of New Kingdom sites in the region of western Thebes.

In the New Kingdom a few private individuals were also granted permission to build mortuary chapels in western Thebes. The largest of these non-royal mortuary temples was built for Amenhotep son of Hapu, to the west of the mortuary temple that he constructed for his king, Amenhotep III. Considerably larger than the nearby mortuary temple of Thutmose II, Amenhotep son of Hapu's temple consisted of a sanctuary, entered through two pylons and courts, the first of which contained a large pool surrounded by trees.

8.3 Amenhotep III's Malkata Palace

In the New Kingdom kings built smaller residences throughout the country, where they stayed as they traveled. At Medinet Gurob near the entrance to the Faiyum region Thutmose III built what may have been a kind of retreat near a harem palace for senior royal women, which also housed a weaving industry. Barry Kemp has reconstructed two of these small royal "rest houses." A kind of 18th-Dynasty hunting lodge was located near the Giza Sphinx, and to the south of Amenhotep III's palace in western Thebes at Malkata (at Kom el-'Abd), the king built a small rest-house that was used for chariot exercise.

Amenhotep III’s large Malkata palace was built for his first *sed*-festival in regnal Years 29–30. In 1888 Georges Daressy did some initial exploration of the site, and the palace was first systematically excavated in the early 20th century by British Egyptologist Percy E. Newberry and the American Robb de Peyster Tytus. Later excavations in the 1970s were conducted by David O’Connor and Barry Kemp, and a Japanese expedition from Waseda University, Tokyo, which also located a ceremonial construction for the king’s *sed*-festival at Malkata South.

At Malkata Amenhotep erected a main palace surrounded by an enclosure wall, which was rebuilt, probably for later *sed*-festivals (which were celebrated in Years 34 and 37) (Figure 8.3). According to Kemp, use of the palace was ceremonial, while O’Connor thinks that it also functioned as an administrative center. The main palace contained throne rooms, colonnaded reception and audience halls, courts, and private suites. There were also storerooms, kitchens, work rooms, and quarters for officials. Three or more subsidiary palaces were also built near the complex for members of the royal family, and to the north was a temple of Amen. High officials were housed in nearby villas and there was also a workmen’s village (“North Village”) to the west of the North Palace.

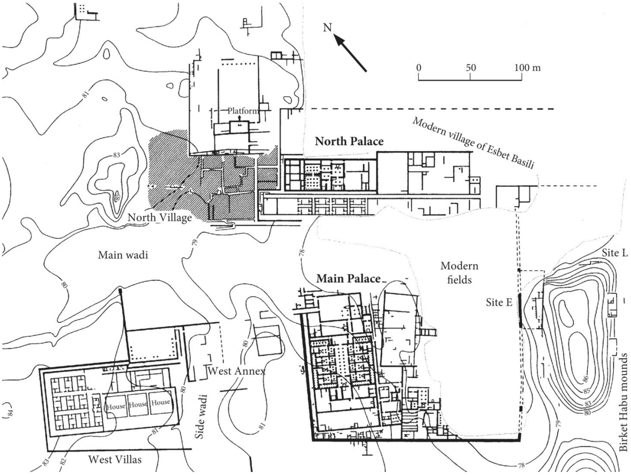

N
0
50
100 m
Platform
Modern village of Esbet Basili
North Palace
North Village
Main wadi
Main Palace
Modern fields
Site E
Site L
West Annex
Side wadi
House
House
House
West Villas
Birket Habu mounds

Figure 8.3 Plan of Amenhotep III’s Malkata palace complex.

Source: B. J. Kemp, *Ancient Egypt: Anatomy of a*

Civilization. London: Routledge, 1989, Figure 74. Copyright © 1989 by Routledge. Reproduced by permission of Taylor and Francis Books UK.

The mud-brick palace was lavishly decorated with colorful frescoes – even in the storerooms. For example, in the great central hall the floor was covered with scenes of a papyrus marsh from which arose 16 columns ending in capitals of lotus buds. Painted on the steps to the king's throne were bound enemies and bows, which he would have trampled symbolically. The king's suite contained various private rooms, including a bathroom and bedroom with a raised bed platform. An antechamber there was painted with bulls' heads and rosettes in a spiral design.

An enormous artificial lake, now called the Birket Habu, was excavated for ceremonial use and was later expanded to an area ca. 2 × 1 kilometers. Some of the excavated soil from the lake was used to make a base for Amenhotep III's mortuary temple to the northeast, of which little remains. During the king's *sed*-festival, the lake was the setting for rituals involving ceremonial barges, which were towed, as described in a text in the Theban tomb of Kheruef (TT 192), one of the high royal officials.

Inscribed jar labels excavated in and around the Malkata site span a period from Year 8 of Amenhotep III's reign to Horemheb's reign, but it is uncertain if the site was used during the Amarna Period. The jar labels indicate royal provisioning, not only for the large ceremonies that took place there periodically during Amenhotep III's reign, but also for state workers and personnel who built and cared for the site.

About 1 kilometer from the Malkata site are the remains of Amenhotep III's mortuary temple, where only the Colossi of Memnon, which originally flanked the temple's first pylon, can be seen today. Much more is now known about this temple as a result of the recent work of the Colossi of Memnon and Amenhotep III Temple Conservation Project, under the direction of Hourig Sourouzian, which has focused on conservation, excavation, documentation, and study of the site. The dimensions and plan of this huge temple are now documented, and statues, reliefs, and texts which decorated it have been excavated – including over 60 statues of the goddess Sekhmet. This temple and the Malkata complex clearly demonstrate the impressive monuments that Amenhotep III left in western Thebes.

8.4 Tell el-Amarna and the Amarna Period

Before Amenhotep IV moved his court to the new capital at Tell el-Amarna in Middle Egypt, he erected four shrines at East Karnak. Although his father Amenhotep III had constructed major temples at Luxor and Karnak, dedicated to the cult of Amen-Ra, his son's shrines in the Amen temple precinct at Karnak honored the sun-disk deity Aten. The new cult established by Amenhotep IV, who subsequently changed his name to Akhenaten to honor this deity, was later regarded as heresy. Akhenaten's Karnak monuments were dismantled and blocks of relief from these shrines were used as fill in later constructions at Karnak and Luxor, where they have been found in the course of restoration work in the later 19th and 20th centuries. Decorated with reliefs and inscriptions, thousands of recovered blocks formed a kind of enormous jigsaw puzzle to reconstruct for the Akhenaten Temple Project, directed by Donald Redford (University of Toronto and now Pennsylvania State University).The project included excavations at East Karnak to determine the architectural context of the reliefs from foundation remains. The preserved Karnak *talatat* blocks have now been cleaned and documented in a database by the ARCE Talatat Project, with data recorded for over 15,500 blocks including details of the reliefs and texts.

Akhenaten's Karnak reliefs display the early forms of his radically new Atenist religion, which could not have pleased the priests of the nearby Amen cult. Aten is depicted as a sun-disk with rays ending in human hands, which extend the hieroglyph for life (*ankh*) to the king and his queen Nefertiti (Plate 8.3). With the change in religion, there was also a change in art style. The king is depicted in a bizarrely mannered style, with bloated belly, wide hips, fleshy breasts, and a thin elongated face with large lips and bulbous chin. Colossal statues of the king, in the same style and with cartouches carved on his arms and torso (also an innovation), were originally in a court at East Karnak. The shrines were erected quickly, made possible by the innovation of the so-called *talatat* blocks of sandstone used to decorate the monuments, which were small enough so that one workman could carry one block on his shoulder.

It has been suggested that Akhenaten suffered from a glandular disease which deformed his body, as seen in the early sculpture, but Nefertiti is depicted in the same exaggerated style. Both the king and queen are also known in sculpture of a highly realistic style, including the famous Nefertiti head in Berlin (Plate 8.4). Since Akhenaten's mummy has not been identified, such a theory cannot be tested on his physical remains, and an art style alone cannot demonstrate a medical problem.

Relief scenes from East Karnak include the king's *sed*-festival, which was celebrated quite early in his reign, in Year 2 or 3. The royal couple also perform the ritual of presenting offerings to Aten, while scenes honoring the other important deities are absent. Many temple scenes are of the king and queen in daily life, albeit of a ceremonial nature within the context of temple and palace, such as riding their chariots and making appearances at a special palace window (the "Window of Appearances"). Other reliefs include scenes of workmen building the temple – all of which are a radical departure for temple decoration that would be repeated later at Amarna. The importance of Nefertiti in the Aten cult is clear, and one whole monument at Karnak was devoted to her without Akhenaten.

Akhenaten's later monuments were located at Akhetaten (Tell el-Amarna), the capital he founded on the east bank in Middle Egypt, which also became the cult center of Aten (Figure 8.4). Given the usually poor preservation of ancient settlements in Egypt, Amarna's remains are exceptional. The site was surveyed in the early 19th century, and Flinders Petrie conducted the first extensive excavations there in the 1890s. From 1901 to 1907 Norman de Garis Davies carefully copied scenes and inscriptions from tombs and boundary stelae. German archaeologist Ludwig Borchardt excavated at the site before World War I, which is why the famous head of Nefertiti is in the Egyptian Museum in Berlin. Since 1977 Barry Kemp has been systematically investigating the site for the Egypt Exploration Society, which also sponsored excavations there after World War I.

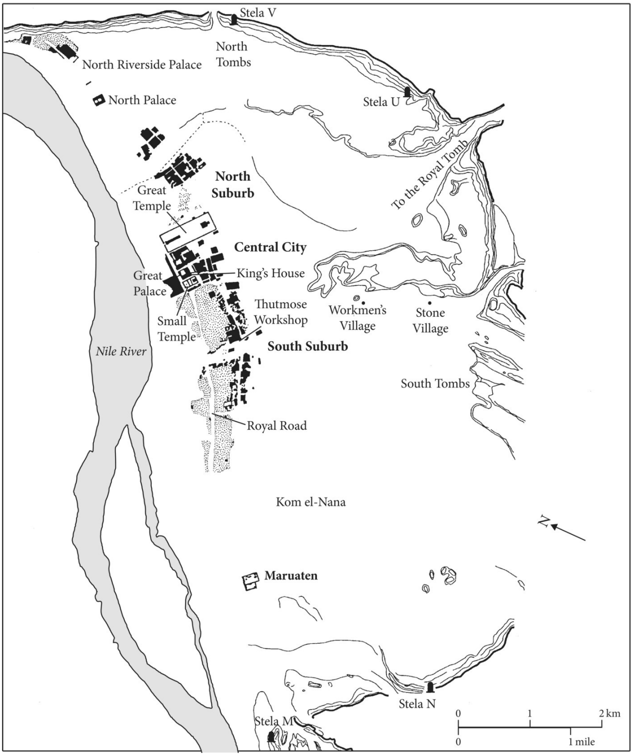

Stela V
North Tombs
North Riverside Palace
North Palace
Stela U
North Suburb
Great Temple
To the Royal Tomb
Central City
Great Palace
King's House
Thutmose Workshop
Workmen's Village
Stone Village
Small Temple
Nile River
South Suburb
South Tombs
Royal Road
Kom el-Nana
N
Maruaten
Stela N
Stela M
0
1
2 km
0
1 mile

Figure 8.4 Plan of the city of Akhetaten (the site of Tell el-Amarna), including the eastern tombs.

Source: illustration by Peter Der Manuelian (after Barry Girsh, in Dorothea Arnold, *The Royal Women of Amarna*. New York: Metropolitan Museum of Art, 1996, Figure 13). R. E. Freed, Y. J. Markowitz, and S. H. D'Auria (eds.), *Pharaohs of the Sun. Akhenaten. Nefertiti. Tutankhamen*. Boston: MFA Publications, an imprint of the Museum of Fine Arts, Boston, in association with Bulfinch Press/Little, Brown, 1999, p. 15. © Museum of Fine Arts, Boston.

The city of Akhetaten, which covered an area of ca. 440 hectares, had no surrounding wall. Although it was a special purpose city, it nonetheless provides an example of Egyptian urban planning (Figure 8.5). The city was organized with a core center planned on a grid, with administrative buildings and residences of different sizes extending southward to the River Temple. To the north were the North City, North Suburb (with ca. 300 houses), and two palaces. To the east was a walled workmen's village (with ca. 70 houses), and unfinished rock-cut tombs for high officials were in northern and southern groups in the eastern cliffs. The Royal Tomb was located up a central wadi in the eastern cliffs.

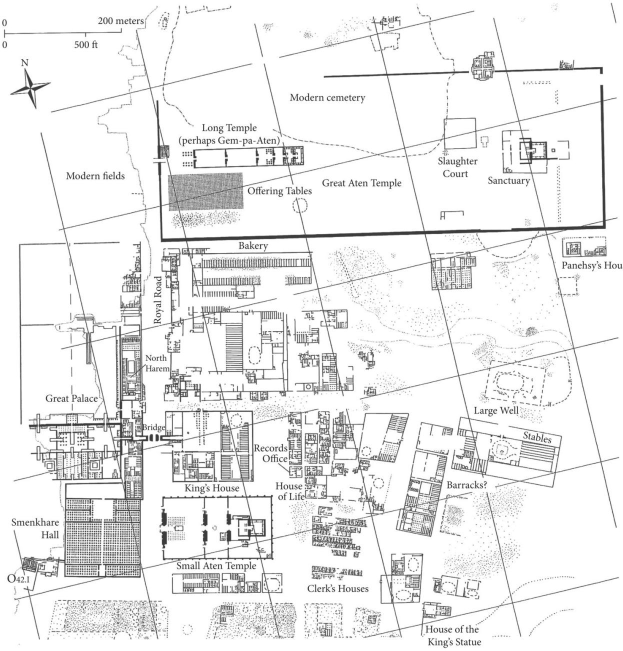

0
200 meters
0
500 ft
N
Modern cemetery
Long Temple
(perhaps Gem-pa-Aten)
Modern fields
Offering Tables
Great Aten Temple
Slaughter
Court
Sanctuary
Bakery
Panehsy's House
Royal Road
North
Harem
Great Palace
Bridge
Records
Office
Large Well
Stables
King's House
House
of Life
Barracks?
Smenkhare
Hall
Small Aten Temple
O42.1
Clerk's Houses
House of the
King's Statue

Figure 8.5 Plan of the central city of Akhetaten.

Source: Barry Kemp, *The City of Akhenaten and Nefertiti: Amarna and Its People*. London and New York: Thames & Hudson, 2012, p. 38, Figure 1.10. Reproduced by permission of Barry Kemp.

The city was occupied for about 11 years during Akhenaten's reign, and abandoned by the court early in Tutankhaten/-amen's reign. Some occupation continued there in the 19th Dynasty, when the Amarna stone temples were dismantled and statues smashed (probably during the reign of Rameses II), but mud-brick buildings were simply left to decay. The site was briefly reoccupied in Roman times, and in Coptic times monks lived in some of the northern tombs, one of which became a small church.

The central city contained the largest temple and palace. With an enclosure wall ca. 730 × 229 meters, the Great Aten Temple was entered on the west from the Royal Road. Within this huge enclosure were two main stone structures: the Sanctuary on the east, and the Long Temple to the west. The latter consisted of a columned court and a series of open courts with offering tables and sanctuaries, to the south of which were over 900 open-air offering tables. The Sanctuary has also been reconstructed by Kemp as an open-air temple. Two courts contained numerous small altars, with the temple's high altar in the second one. The Sanctuary represents a new style of temple architecture, with the innermost room open to the sun, instead of a dark closed sanctuary for the god's statue. As depicted in Amarna reliefs, Akhenaten and Nefertiti honored Aten at this altar, piled high with food.

To the south of the Great Temple were associated structures, including over 100 baking rooms where many sherds of bread molds were found, as well as the official residence of the high priest and "Keeper of the Cattle of Aten," Panehesy (where bones of butchered cattle found during the original excavations in 1926 have recently been retrieved from the excavation dump and studied by zooarchaeologist Phillipa Payne). There was also a small private palace (the "King's House"). According to Kemp, this palace was associated with the largest granaries at Amarna (ca. 2,000 square meters) – suggesting royal and not temple control of basic staples for the king's officials. A small temple (the "House of Aten"), was possibly some kind of royal mortuary temple, and to the east of this were administrative buildings, including the so-called Records Office, where the Amarna Letters were found (see Box 8-A). Farther east were possible quarters for the military police and stables for horses.

To the west of the Royal Road, which was spanned by a triple-arched bridge, was the Great Palace, much of which has been destroyed by later cultivation. On the east side were rooms of the so-called North and South Harems, a garden court with a pool, and many storerooms. This part of the palace was colorfully painted, including a columned portico with pavement scenes of a papyrus marsh full of birds, with fish swimming in a rectangular pool. The palace had a large courtyard around which were colossal royal statues, and associated buildings, all in stone, probably for special receptions and ceremonies. To the south was an enormous hall with 510 mud-brick columns in 30 rows.

Box 8-A The Amarna Letters

The Amarna Letters were found by peasants at the site of Amarna in 1887, before proper excavations had begun there. Unfortunately, a number of tablets were lost before they were recognized for what they are: Egypt's diplomatic correspondence with the major and minor powers in southwest Asia. Over 380 tablets are known from Amarna, mostly dating to the reign of Akhenaten and coming from a royal archive. But a few tablets are from the latter part of Amenhotep III's reign and possibly the early years of Tutankhamen's reign.

The letters were written on clay tablets in cuneiform script, and a few also have inked hieratic (Egyptian) notes of scribes recording their receipt at Akhetaten. Cuneiform was used to write a number of different languages in southwest Asia for about 3,000 years. The language in most of the Amarna cuneiform texts is (middle) Babylonian, of a regional form used in the diplomatic correspondence of the ancient Near Eastern powers of the Late Bronze Age.

The letters provide a wealth of information about Egypt's foreign affairs. Some of the correspondence was with the kings of independent states: Assyria, Babylonia, Hatti (the Hittites), Mitanni (northern Syria), Arzawa (southern coastal Anatolia), and Alashiya (Cyprus). Egypt definitely had the upper hand in these negotiations – of valuable "gifts," craftsmen, and royal women sent to Egypt, mainly in exchange for Egyptian gold. Letters from the small polities of coastal Syria and Palestine that were under Egyptian control are more about administrative matters, and there are many requests for Egyptian military aid – painting a picture of squabbling self-interest and petty conflicts.

Barry Kemp has suggested that possibly there was a kind of international scribal school in or near the Record Office at Amarna, as suggested by a cuneiform "vocabulary" text on one of these tablets, with Egyptian words written (phonetically) in cuneiform signs in a column on the left and their equivalents in Babylonian on the right. Three fragments of cuneiform tablets have also been found in houses at Amarna – possible evidence of a Near Eastern official in residence at Amarna, or in the case of a tablet with a sign list, an Egyptian learning to read Babylonian.

The letters also provide some information about the increasing success of the Hittites in extending their territory from central Anatolia into northern Syria, at Egypt's expense. A note can be added on the end of the Amarna Period. A widowed Egyptian queen (probably Tutankhamen's) wrote a letter to the Hittite king Suppiluliuma stating that there was no king ruling in Egypt. She asked for a Hittite prince to be sent to Egypt so that he could become king. This, of course, would never have been accepted by Egyptian officials and aspirants to the throne. The Hittite prince was assassinated on his way to Egypt, and the last rulers of the 18th Dynasty, Ay (briefly) and (General) Horemheb, were not the descendants of Akhenaten or Tutankhamen.

To the south of the central city was a residential area, the Main City, which Kemp characterizes as "a series of joined villages." House compounds there included that of the sculptor Thutmose, where Nefertiti's head and other royal sculptures were found. Large circular wells, each with a spiraling ramp, were located throughout this part of the city. Large houses were next to small ones, and although there was a hierarchy of house sizes, which suggests a hierarchy of socio-political status at Amarna, there were not exclusive neighborhoods only for high-status families.

Amarna houses were walled mud-brick residences within a brick enclosure wall. The large house of the vizier Nakht had 30 rooms (many of which were only a few square meters in area), but even he, as one of the highest ranking government officials, lived in a significantly smaller dwelling than the palaces of the royal family. A typical large house at Amarna had a small entrance room, a columned reception hall, and a living room with an elevated platform where the owner (and his wife?) sat. This part of the house had a raised ceiling, with windows just below the roof line. There were also private quarters with bedrooms and a bathroom. A staircase led to the roof, which may have been used in warm weather, but the larger houses may have had upper stories. Private shrines with reliefs of Akhenaten and Nefertiti worshipping Aten, sometimes set within a garden, have been found at some Amarna houses.

Barry Kemp has described the basic elements of an Amarna house compound, which included circular grain silos in a court (but some houses also had larger vaulted rooms for grain storage). That grain was stored in private houses indicates some economic independence from the crown, which did not provide sustenance for all the inhabitants at Amarna, and probably private land holdings of such individuals. Cooking took place in ovens and hearths outside the house, and animals were kept in sheds. Trees and possibly vegetable gardens were also associated with some houses. Larger houses were also where small-scale production facilities were located, including weaving and potting. Artisan's workshops could be within the compound or just outside the walls. With no public sewage system, garbage and waste were dumped outside the houses, often near the public wells.

The eastern Workmen's Village was organized much more rigidly along five north–south streets, with about 70 small houses, including one for an overseer. Unlike the city of Akhetaten, the village was surrounded by a thin wall. Arranged in six blocks, the houses consisted of a hall or court, living room, and two small rear rooms and a back staircase to the roof. Upper rooms may have been added by the inhabitants.

The state must have provided water, grain, and basic materials and tools to the workers. Animal pens were located outside the village, where there is evidence of a pig industry. Pigs were butchered and the meat was salted and packed in jars, probably to supplement the villagers' income. A number of mud-brick chapels, not associated with graves, were also located outside the village and may have been used by families for commemorative rituals. According to Frances Weatherhead, the chapel wall paintings avoided the Amarna style, and other deities were commemorated, including Amen and Isis (whose cults were ignored by Akhenaten). Painted figures of Bes, probably a protective household deity, are also known from houses at Amarna, including the Workmen's Village (and at Deir el-Medina; see 8.11).

More than 1 kilometer to the southeast of the Workmen's Village was the Stone Village, with an associated cemetery to the southeast. First located in 1977, the village was excavated beginning in 2005 under the direction of Anna Stevens and Wendy Dolling. Although the stone-walled houses in this village were more informal in plan than those of the Workmen's Village, the village was probably for a permanent population. The many basalt chips excavated in the village are the debitage from tool making, suggesting that desert-based workers engaged in stone quarrying and/or tomb cutting lived there.

About 2 kilometers to the south of the Stone Village was another cemetery, the South Tombs Cemetery, with non-elite burials of the Amarna Period. Studies of the skeletal remains began in 2006 by the Amarna Bioarchaeology Project team (and later field school) from the University of Arkansas. Initial results demonstrate that a large proportion of the humans buried there had short life spans. There is also evidence for childhood nutritional deficiencies and work that involved high risks of injury.

Unlike the geography at Thebes, the elite Amarna tombs were in the cliffs to the east of the city. The Royal Tomb and four unfinished tombs were located farther east in the "Royal Wadi." Although unfinished and robbed, the royal tomb still had smashed pieces of a sarcophagus in a pillared hall. According to Egyptologist Geoffrey Martin, who studied this tomb, one room may have been intended for Nefertiti's burial. Relief scenes in rooms which open off the tomb stairway include a royal woman's funeral, perhaps the result of the death of one of Akhenaten's daughters during childbirth.

Located in two groups to the north and south of the Royal Wadi, most of the Amarna rock-cut tombs were unfinished when the city was abandoned by the court. In the desert near the northern tombs were three so-called desert altars, which Kemp suggests may have been built for some kind of short-term royal celebration.

Many of the reliefs that decorate the Amarna tombs are in poor condition, in part because of the poor quality of limestone in which they were carved. Pre-Amarna Period tombs have relatively few religious scenes and texts, which are missing in the Amarna tombs (with many more in post-Amarna Period tombs). But traditional scenes of the tomb owner, his offices, and his estates, are missing at Amarna. Thus, even in the mortuary cult there were major ideological changes at Amarna. Osirian themes, concerning the most important Egyptian afterlife beliefs, are absent in these tombs. Many tomb scenes focus on the royal family and their activities, especially scenes honoring Aten. Very detailed scenes show the architecture of the palace, Great Temple, and other buildings (as on many *talatat* blocks) – which has also helped archaeologists to better understand the plans and functions of these buildings. But interpretation of these scenes is not simple because they are not straightforward plans or elevations.

Also found in reliefs from Amarna tombs and other monuments is a change in subject matter. The royal family is frequently depicted in intimate scenes of familiarity. One fragmentary stela even has Nefertiti seated on Akhenaten’s lap, and the king is often shown holding or kissing his small daughters (Figure 8.6). Such scenes are not known before or after the Amarna Period, and seem undignified compared to traditional scenes of the idealized god-king. Possibly Akhenaten had ideological reasons for such depictions of the royal family. Scenes of the army parading along the Royal Road at Akhetaten (and not in battle) are also common. Given the major economic problems that must have arisen when the many gods’ cults (and their priesthoods and temple personnel) were no longer supported, Akhenaten certainly needed the support of the military during his 17-year reign.

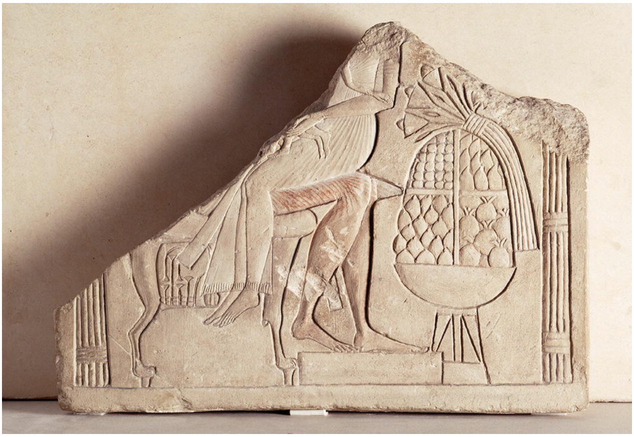


Figure 8.6 Fragmented relief of Akhenaten with Nefertiti on his

lap holding two princesses.

Source: © RMN-Grand Palais (Musée du Louvre)/Franck Raux.

Another of the many changes that occurred during the Amarna Period is the use in texts of Late Egyptian, which was the vernacular of the time. For traditional reasons, Middle Egyptian, which was no longer the spoken language, continued to be used in official and religious texts, but Amarna texts are written in a form of Late Egyptian. The "Hymn to Aten," which is found inscribed in Amarna tombs, describes an omnipotent and universal god, the creator of all living things – which is also depicted in a lively and naturalistic style in reliefs from Karnak. A number of images in this hymn are paralleled in the 104th Psalm in the Old Testament.

Akhenaten has sometimes been called the world's first monotheist, and even Sigmund Freud wrote a book about this: *Moses and Monotheism*. But Akhenaten's religion had a dual aspect: the celestial Aten, and the worship of the god through his son Akhenaten (and Nefertiti). Thus, there was a certain remoteness to the sun-disk Aten, who unlike other Egyptian gods was not depicted in an anthropomorphized image. As noted above, the changes that occurred were cultural, not only religious, and the reforms were of such an all-encompassing nature that they probably emanated directly from Akhenaten.

The Amarna Period is a fascinating though brief time that produced extraordinarily beautiful art and decoration – and a royal capital that has been extensively investigated by archaeologists. It is both ironic and fortuitous that because of so much intentional dismantling and reuse of stone from Akhenaten's monuments a great deal of information about this unique period has been preserved.

8.5 The Amarna Aftermath and Tutankhamen's Tomb

Late in Akhenaten's reign Nefertiti was possibly named Akhenaten's co-regent (Neferneferuaten), and their oldest daughter, Meritaten, was named her father's "consort" – not a wife but the most important female in the court. Meritaten married Smenkhkara (of uncertain parentage), who ruled briefly(?) after

Akhenaten’s death, but with his death Tutankhaten became king at age 8 or 9. Tutankhaten, who was probably Akhenaten’s son by another wife (Kiya?), married Ankhesenpaaten, perhaps 12 years old, the third daughter of Akhenaten and Nefertiti and probably her husband’s half-sister.

By Year 3 of Tutankhaten’s reign the court had returned to Memphis, and the Amarna “revolution” was over. Highly debated is whether Akhenaten’s mummy was brought back to Thebes and buried in a small tomb in the Valley of the Kings (KV 55), but the mummy of an unidentified male in this tomb is too young to be that of Akhenaten. A gilded wooden shrine, originally made for Akhenaten’s mother Tiy, was also found in this tomb, along with burial equipment that had been planned for a secondary wife of Akhenaten’s, Kiya.

Tutankhaten’s name was changed to Tutankhamen, and a royal edict was issued, which was inscribed on the “Restoration Stela.” The stela describes Egypt during the previous reign as a country that had been abandoned by the gods. To restore order, the old cults, especially that of Amen-Ra, were reopened, new cult statues were made, and revenues that had previously gone to the Aten cult were directed to other temples throughout Egypt. Although not stated on the stela, the destruction of Akhenaten’s monuments also began at this time.

It is unlikely that the young Tutankhamen implemented these changes himself; he was probably manipulated by high court officials and priests of the traditional cults. One official who may have been instrumental in the subsequent events was Ay, possibly a brother of the boy-king’s deceased grandmother Tiy (chief wife of Amenhotep III and mother of Akhenaten). Although a tomb had probably been started for Tutankhaten at Amarna, it was abandoned and another one was prepared at Thebes but remained unfinished at the time of his death.

Tutankhamen was an insignificant king, famous today only because his small cluttered tomb was found mostly intact in 1922 with huge amounts of gold artifacts (see Box 8-B), unlike all other royal tombs of the New Kingdom. Although there is evidence that ancient robbers had penetrated the tomb twice, they must have been caught or stopped before much could be stolen or damaged, and the tomb was resealed by officials. Much smaller than other royal tombs of the 18th Dynasty, Tutankhamen's tomb (KV 62) was not planned for his burial, but was quickly adapted for it when the young king died. Its discovery by Howard Carter is truly one of the great stories in modern archaeology.

Because of Carter's meticulous care in recording all the artifacts in the tomb *in situ*, by drawings, notes, photographs, and a numbering system, the context of each item found in the tomb is known. If the tomb had been extensively robbed in antiquity most tomb goods would have been lost, with the gold melted down for reuse. If the tomb had been robbed in recent times, tomb goods would have been sold to antiquities dealers piece by piece, and the true arrangement of the king's burial would remain unknown. Fortunately, the "wonderful things" in Tutankhamen's tomb that Carter found and then recorded were carefully packed and sent to the Egyptian Museum in Cairo, where generations of visitors to Egypt (as well as scholars) have marveled at this great discovery.

Box 8-B Howard Carter and Lord Carnarvon: The discovery of Tutankhamen's tomb

In 1901 George Edward Stanhope Molyneux Herbert, fifth Earl of Carnarvon, was in a car accident in Germany, which left him frail and unhealthy. His doctor recommended wintering in warmer climes and in 1903 he went to Egypt, where he took up Egyptology as a kind of hobby. The next year, realizing that he needed a trained professional, Lord Carnarvon hired Howard Carter, who had been working in Egypt since 1891. Their collaboration would ultimately lead to one of the greatest archaeological discoveries in the world.

In the years before World War I Carter excavated a number of private tombs in western Thebes and in early 1915 he began excavating in the Valley of the Kings, the concession for which had been previously held by a wealthy American from Newport, RI, Theodore Davis. With Lord Carnarvon in England, Carter's exploration of the Valley of the Kings was curtailed by World War I until 1917. For the next five years he searched in the Valley for Tutankhamen's tomb with no success, and in 1922 Lord Carnarvon decided to end his financial support. But at Highclere Castle, Carter said that he would personally fund a final field season, to excavate in one last area in the Valley. Relenting, Lord Carnarvon agreed to fund the work.

On November 1, 1922, Carter began digging in an area where in 1920/21 he had stopped working because all he found were the huts of workmen employed constructing the tomb of Rameses VI. Three days later, on November 4, his workmen uncovered the top of a rock-cut stairway. The next day more steps were cleared, revealing a plastered wall covered with stamped cartouches. Covering up the steps, Carter then sent a telegram to Lord Carnarvon in England about a "wonderful discovery … congratulations."

Taking a ship from Southampton, Lord Carnarvon arrived by train in Luxor with his daughter on November 23. Work at the newly discovered tomb began the next day, when more clearance of the plastered wall revealed the cartouche of Tutankhamen. The plaster-covered stone blocks, which were removed, opening into a descending corridor. At the end was another plastered wall, also stamped with cartouches. Puzzled, Carter made a small hole in this wall and inserted a candle – late in the afternoon of November 26. Looking into what would be called the tomb's Antechamber, Carter felt hot air escaping. He would later write: "presently, as my eyes grew accustomed to the light, details of the room within emerged slowly from the mist, strange animals, statues, and gold – everywhere the glint of gold" (Figures 8.7 and 8.8).

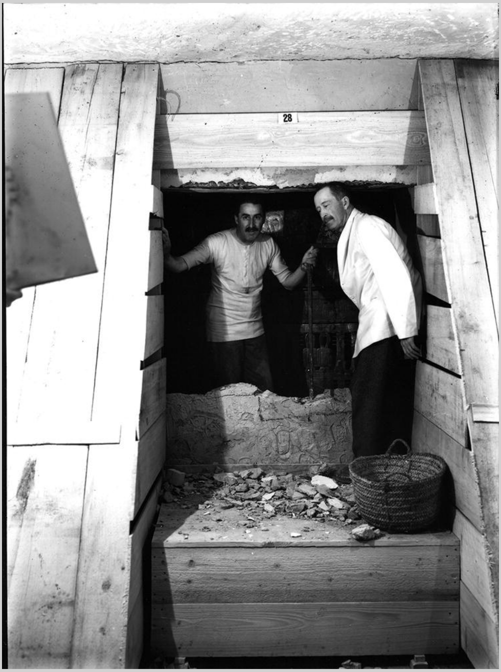


Figure 8.7 Howard Carter and Lord Carnarvon in Tutankhamen’s tomb.

Source: © Griffith Institute, University of Oxford.

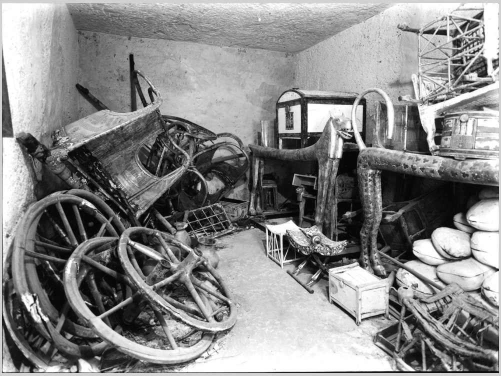


Figure 8.8 View of the antechamber of Tutankhamen’s tomb, taken in 1922.

Source: © Griffith Institute, University of Oxford.

But not long after the king’s burial chamber had been opened Lord Carnarvon was bitten on his cheek by a mosquito, and he nicked the bite while shaving. The opening became infected, and he developed pneumonia. Antibiotics had not yet been discovered, and the earl, frail since his auto accident, died in Cairo on April 5, 1923 at age 57.

There were no curses written anywhere in Tutankhamen's tomb, however, as was rumored in the press. Unfortunately, Lord Carnarvon's death created a number of problems with the Egyptian authorities in 1924, but Howard Carter would eventually spend a number of years with a team of experts and workmen, recording, photographing, conserving, packing, and clearing Tutankhamen's tomb. It was the discovery of a lifetime, and he died at home in London in 1939, at age 65.

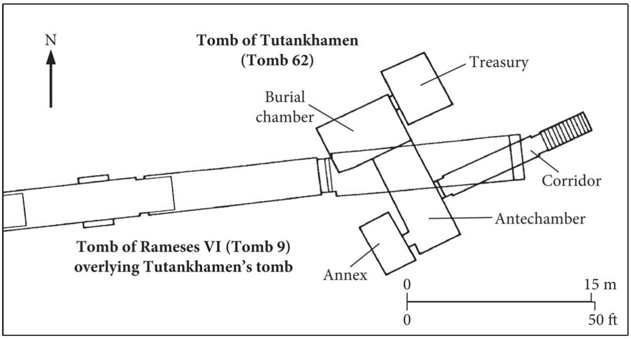

N
Tomb of Tutankhamen
(Tomb 62)
Treasury
Burial
chamber
Corridor
Antechamber
Tomb of Rameses VI (Tomb 9)
overlying Tutankhamen's tomb
Annex
0
15 m
0
50 ft

Figure 8.9 Plan of Tutankhamen's tomb (KV 62), overlain by part of the tomb of Rameses VI (KV 9).

Source: Drawn by Tracy Wellman. From Nicholas Reeves, *The Complete Tutankhamun*. London and New York: Thames & Hudson, 1990, p. 55.

The tomb consists of four small rooms entered from a long corridor at the bottom of 16 steps cut into the limestone bedrock (Figure 8.9). The first is the so-called "Antechamber" in which there were three large beds, disassembled chariots covered in gold foil, travertine vessels, and various stools and boxes. Also found in the Antechamber was the famous Golden Throne, with an inlaid scene on the back of the king being anointed by his wife with perfumed oil (Plate 8.5). Above the royal couple is the Aten sun-disk – indicating that the throne was made at the end of the Amarna Period. Names of both the king and the queen in the cartouches on the throne had been altered to read "Tutankhamen" and "Ankhesenamen," but one cartouche on the outer arm still reads "Tutankhaten."

To the west of the Antechamber in Tutankhamen's tomb is the smaller "Annex," found packed with a disorderly lot of furniture, wine jars, travertine vessels, and 116 baskets with fruit. On the north side of the Antechamber was the sealed entrance to the Burial Chamber, flanked by two wooden statues of the king with a gold-covered headdress, kilt, and jewelry, holding a gold mace and striding with his walking stick. The Burial Chamber is the only decorated room in the tomb with mortuary inscriptions and scenes of the funeral and of Tutankhamen with gods of the afterlife, especially Osiris.

Tutankhamen's mummy was placed within a series of four gold-covered shrines bolted shut, with only a narrow space between the outermost one and the walls of the burial chamber (Figure 8.10). It took Carter eight months to carefully dismantle the shrines, inside of which was a quartzite sarcophagus. Within the sarcophagus were three nested coffins. The outer two coffins are made of wood covered with gold foil, and the innermost coffin is of solid gold. Covering the mummy was a solid gold mask of the king wearing the *nemes* headdress (Plate 8.6). Within the many layers of linen wrappings, the mummy was covered with over 100 pieces of jewelry, amulets, and ornaments, mostly in gold – and something very rare for the time, a gold-handled dagger with an iron blade.

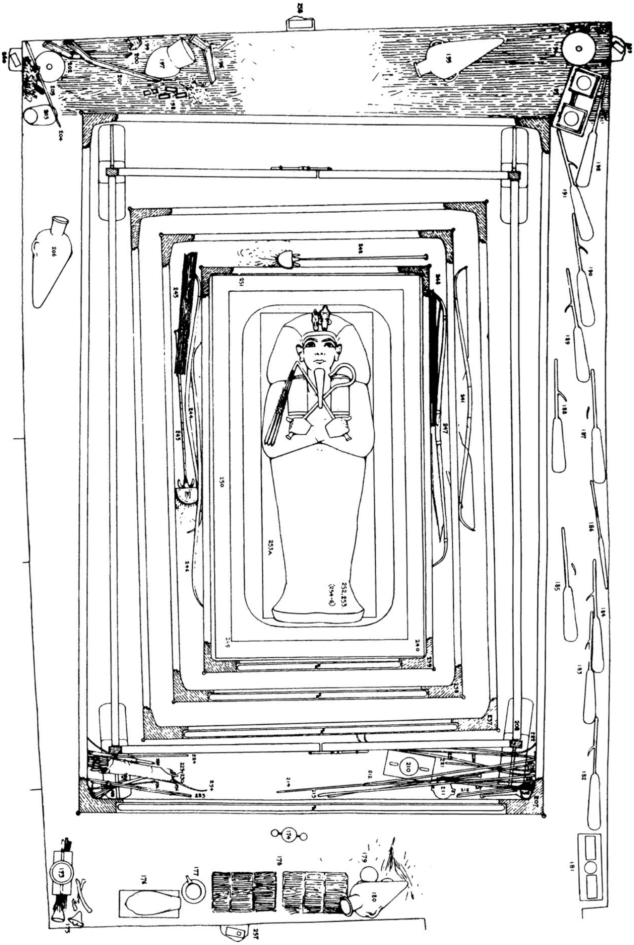


Figure 8.10 Plan of Tutankhamen’s burial chamber, with four shrines, sarcophagus, and coffins.

Source: Nicholas Reeves, *The Complete Tutankhamun*. London and New York: Thames & Hudson, 1990, p. 85. Reprinted by permission of the Griffith Institute.

The Treasury, opening to the north of the Burial Chamber, was protected with a crouching statue of the jackal-god Anubis on a portable shrine, covered in a linen shroud. There were many boxes in this room along with model boats, but the most important artifact was the gold-covered canopic shrine containing a travertine chest with the king’s embalmed viscera in small gold coffins (Plate 8.7). Two mummified fetuses were also in small coffins in an undecorated box in the Treasury, perhaps from miscarriages of Tutankhamen's wife Ankhesenamen.

The amazing finds in Tutankhamen's tomb can only be briefly discussed here. Aside from the large artifacts described above, Tutankhamen was buried with just about everything he would need in life. Clothing includes linen garments, and even underwear in the form of triangular loincloths. Twenty-seven pairs of gloves were found, including a small pair used by the king as a child. Materials for sandals range from gold to beaded leather and woven papyrus. One box contained the king's shaving equipment, and there are sets of writing equipment with pens, pen cases, and a papyrus burnisher.

Musical instruments include ivory clappers, sistra, and trumpets made of silver or copper alloy. There is an inlaid ebony game board for *senet*, and another one for the "game of 20 squares." A tiny coffin nested within three larger coffins contained a braided lock of hair, which, according to the inscription, had belonged to Tutankhamen's grandmother, Queen Tiy. Sixteen bows were found throughout the tomb, and other weapons include clubs, throw-sticks, daggers, and swords. Numerous vessels are made of pottery, travertine, faïence, glass, silver, and gold.

Real food in the tomb includes pieces of beef, sheep/goat, geese, ducks, loaves of bread, and seeds of emmer wheat and barley. Lentils, chick peas, and peas were also found. Flavoring for the king's food includes garlic bulbs, juniper berries, coriander, fenugreek, sesame seeds, and black cumin – as well as two jars of honey. Whole fruits were found in baskets, including persea, dates, sycamore figs, and grapes/raisins – and there were also watermelon seeds. Twenty-six of the wine jars found in the tomb had hieratic inscriptions, many of which identified the type of wine inside, its date (regnal year of Tutankhamen), where it came from – and even the name of the chief vintner. Bouquets of real flowers had been left in the tomb, and a wreath of (imported?) olive leaves and blue flowers was found on top of the king's outermost coffin.

A CT scan of Tutankhamen's mummy in 2005 revealed a kneecap fracture, which possibly became infected and was the cause of his early death. Then in 2010 an analysis of Tutankhamen's DNA (along with that of ten other, presumably blood-related, mummies) was published in the *Journal of the American Medical Association*, one result of which was that Tutankhamen's DNA showed genetic evidence of a malaria infection, as well as some anatomical variants, such as an incomplete cleft palate (which had been identified earlier in the CT scan). These results have been challenged by a number of scientists, however: some questioned the technique of DNA analysis used on these mummies (genetic fingerprinting), while others believe that there was not sufficient DNA left in Tutankhamen's mummy for the results to be valid.

After Tutankhamen's death, Ay briefly became ruler and was buried in a larger tomb in the (west) Valley of the Kings, perhaps the one originally intended for Tutankhamen. General Horemheb, who became the last ruler of the 18th Dynasty, had earlier built a beautifully decorated tomb at Saqqara (see 8.10), but as king he was buried in the Valley of the Kings. Ay's mortuary temple in western Thebes was later usurped by Horemheb.

New Kingdom Temples

8.6 Restoration of the Traditional Gods: Sety I's Abydos Temple

Destruction of Akhenaten's monuments continued in the 19th Dynasty, and restoration of the old cults included the construction of new monuments to Egypt's gods. At Abydos, the important cult center for Osiris, the god who judged all in the afterlife, Sety I built a large temple to the south of the earlier Kom el-Sultan temple to Khentiamentiu/Osiris (in which the earliest artifacts are from Early Dynastic times) (Figure 8.11). Sety's temple, which was also worked on by Rameses II, was cleared in the 19th century by Auguste Mariette. To the north of his father's temple, Rameses also built for himself a comparable but smaller temple decorated on the outside with scenes of his Battle at Qadesh.

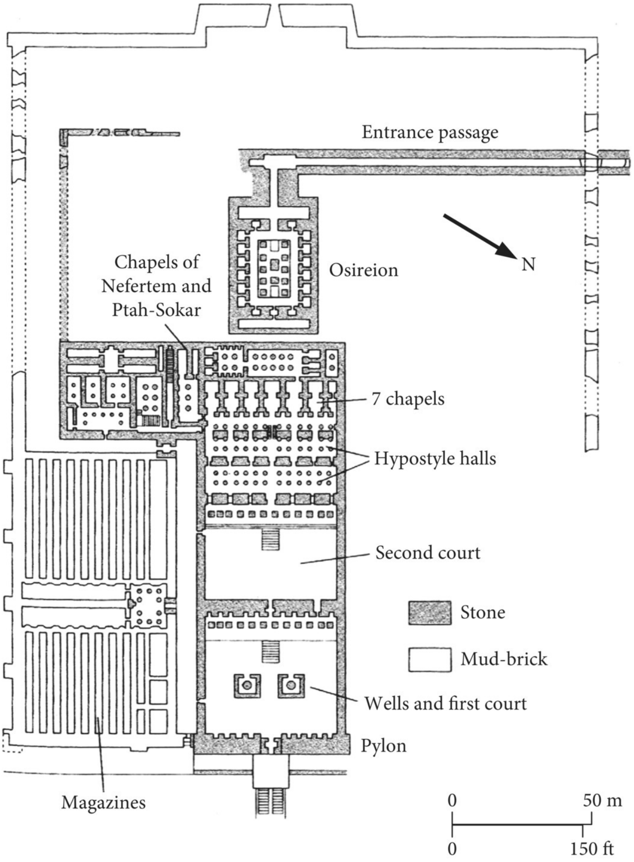

Entrance passage
Osireion
N
Chapels of Nefertem and Ptah-Sokar
7 chapels
Hypostyle halls
Second court
Stone
Mud-brick
Wells and first court
Pylon
Magazines
0
50 m
0
150 ft

Figure 8.11 Abydos, plan of the Temple of Sety I/Rameses II.

Source: Drawn by Philip Winton. Richard H. Wilkinson, *The Complete Temples of Ancient Egypt*. London and New York: Thames & Hudson. 2000, p. 147.

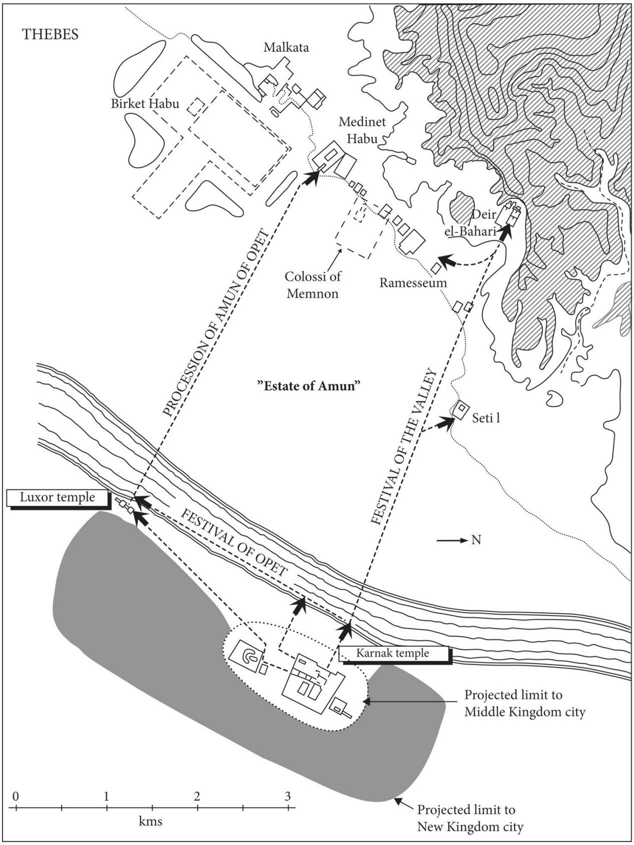
Sety I's Abydos temple originally had two forecourts, with a large pylon fronting the first one, next to which was a large block of long narrow storerooms. These structures are in ruins today and the entrance to the present temple begins at the second portico. Behind this portico are two transverse hypostyle halls, with seven bark chapels in the rear of the temple dedicated to the deified Sety I, Ptah, Ra-Horakhty, Osiris, Isis, and Horus, with Amen-Ra's chapel in the center. Behind these chapels is the Osiris complex, with three chapels at each end and two columned halls. The reliefs in the Osiris complex are about the life and death cycle of the god, and, according to Rosalie David, rituals were held there only once a year, relating to the annual festival of Osiris. The ground plan of the temple forms an unusual “L,” with an addition to the south of the seven chapels including chapels of two important Memphite gods, Nefertem and Ptah-Sokar. In this area of the temple is Sety’s famous king list, which excludes the “illegitimate” rulers of the Amarna Period and its aftermath.

A second structure was also built by Sety I (and partly decorated by King Merenptah), behind (west of) and aligned to his L-shaped temple. This is the so-called Osireion, a symbolic tomb of Osiris. Massive red granite piers were built on top of a platform, around which was a trench for water. The passage leading to it is decorated with mortuary compositions, as in a royal tomb, and the Osireion seems to have been a variation of the plan of a royal tomb, but with some unique features.

8.7 The Temples of Karnak and Luxor in the New Kingdom

Karnak and Luxor were the major foci of royal temple construction in the New Kingdom, both before and after the Amarna Period. On the east bank of the Nile, the Temple of Karnak, centered around the cult of the god Amen, became the largest temple in Egypt. In the Egyptian pantheon, Amen, which means “the hidden one,” had become associated with the Heliopolitan sun god Ra at the beginning of the Middle Kingdom. Amen-Ra was the supreme “king” of all gods, and the earthly king was Amen’s son and “beloved of Amen,” and the intermediary between gods and humans.

The Theban triad of gods consisted of Amen, Mut, and Khonsu, and within the Amen precinct is the Temple of Khonsu, begun by Rameses III of the 20th Dynasty. About 350 meters to the south of the Amen precinct is the precinct of the temple of Amen’s consort Mut, which was mainly built by Amenhotep III and Rameses III. Hundreds of black granite statues of the lion-headed goddess Sekhmet have been unearthed in the Mut precinct during the last two centuries. The most recent excavations there have been conducted by an expedition of the Brooklyn Museum and Johns Hopkins University. Also at Karnak, immediately to the north of the Amen precinct, is the precinct for a temple which was dedicated to Montu, an ancient hawk or falcon god of the Theban area, in the later New Kingdom.


THEBES
Malkata
Birket Habu
Medinet Habu
Deir el-Bahari
Colossi of Memnon
Ramesseum
PROCESSION OF AMUN OF OPET
"Estate of Amun"
FESTIVAL OF THE VALLEY
Seti l
Luxor temple
FESTIVAL OF OPET
N
Karnak temple
Projected limit to Middle Kingdom city
Projected limit to New Kingdom city
0
1
2
3
kms

Map 8.4 Map of Thebes, the "Estate of Amen," in the New Kingdom, showing the main temples and processional routes.

Source: B. J. Kemp, *Ancient Egypt: Anatomy of a Civilization*. London: Routledge, 1989, Figure 97. Copyright © 1989 by Routledge. Reproduced by permission of Taylor and Francis Books UK.

Dedicated to "Amen of Luxor" (Amenope), the Temple of Luxor was the southern destination of the Opet festival (Figure 8.12). Construction of most of the present temple was done by Amenhotep III, who dismantled earlier works there. Aligned toward the Karnak temple from north to south, Amenhotep's temple proceeded from a colonnade with 12 huge columns, with capitals in the shape of an open papyrus, which was added to the temple later in his reign. In front of the colonnade was an entrance flanked by two colossal statues of the king. Reliefs on colonnade walls, including scenes of the Opet festival, were carved later during the reigns of Tutankhamen and Ay, but were usurped by Horemheb. To the south of the colonnade were a large peristyle court around which were two rows of columns, a hypostyle hall, and two columned halls which led to the bark shrine. To the south of the bark shrine and closed off from it were a transverse columned hall and Amenope's sanctuary, where the god's statue stood on a large altar.

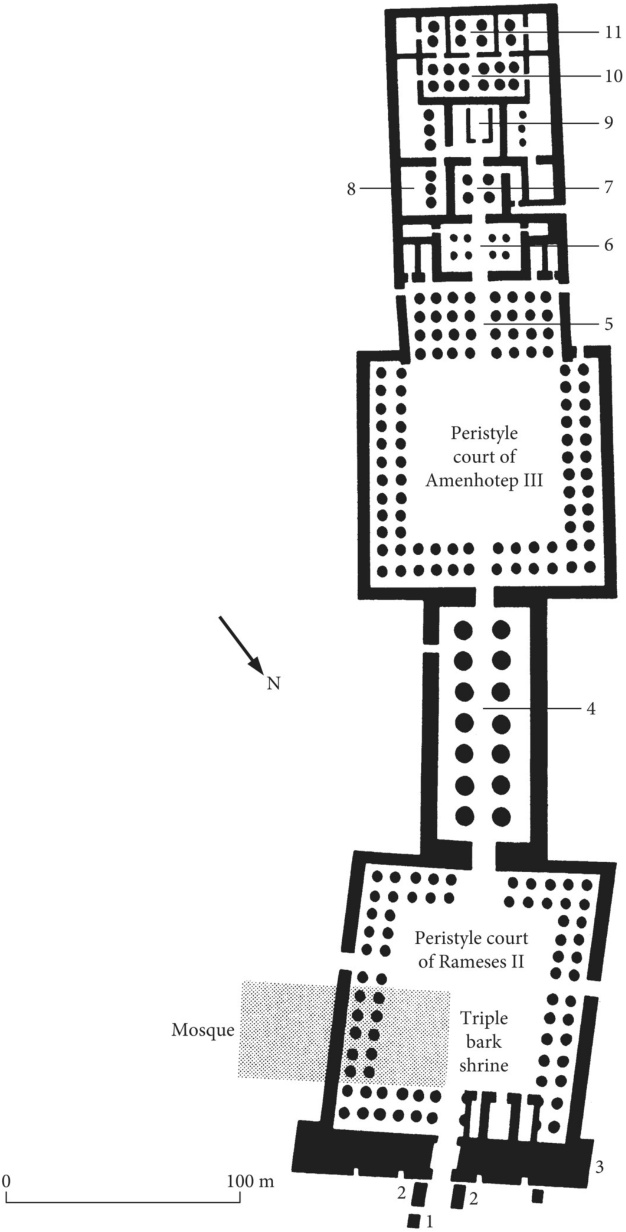

11
10
9
8
7
6
5
Peristyle court of Amenhotep III
N
4
Peristyle court of Rameses II
Mosque
Triple bark shrine
3
0
100 m
2
2
1

Figure 8.12 Plan of the Temple of Luxor: (1) obelisk, (2) seated colossi of Rameses II, (3) pylon of Rameses II, (4) colonnade of Amenhotep III, (5) hypostyle hall, (6) first antechamber, (7) second antechamber, (8) “birth room,” (9) bark shrines of

Amenhotep III and Alexander the Great, (10) transverse hall, and (11) sanctuary of Amenhotep III.

Source: N. Strudwick, and H. Strudwick. *Thebes in Egypt: A Guide to the Tombs and Temples of Ancient Luxor*. London: British Museum Press, 1999, p. 68. Reproduced with permission of The Trustees of the British Museum.

During the reign of Rameses II, a large peristyle forecourt was added to the north of Amenhotep III's pylon, and Rameses converted an earlier bark station for the Opet procession into a triple shrine for Amen, Mut, and Khonsu. On the north side of this court Rameses built a huge pylon, fronted by seated colossal statues of the king and by his two obelisks, one of which was removed in 1835–1836 and now stands in Paris, in the Place de la Concorde. More scenes of Rameses's Battle of Qadesh are found on this pylon.

Extensive recording and study of the reliefs and inscriptions of the Luxor temple colonnade have been conducted by the Epigraphic Survey of the Oriental Institute, University of Chicago. Recently a number of *talatat* blocks of relief, used as fill in the second pylon of the Luxor temple, have been identified as originally coming from one of Akhenaten's Karnak buildings (see 8.4). These blocks were then reused and recarved with new scenes during Tutankhamen's reign for his own mortuary temple, which was subsequently dismantled under Horemhab. The Epigraphic Survey has identified scenes in these reliefs as battles of Tutankhamen in Nubia and Syria.

Unlike the Temple of Luxor, the main orientation of the Karnak temple is east–west (Figure 8.13), from which the bark of Amen would travel to the royal mortuary temples on the west bank in the Festival of the Valley. From the Karnak temple there was also a series of pylons and courts aligned north–south, leading to the processional route to Luxor of the Opet Festival. Although Middle Kingdom structures have been identified from foundations (and the reconstructed bark shrine of Senusret I; see 7.5), the standing architecture there today dates to the New Kingdom and later.

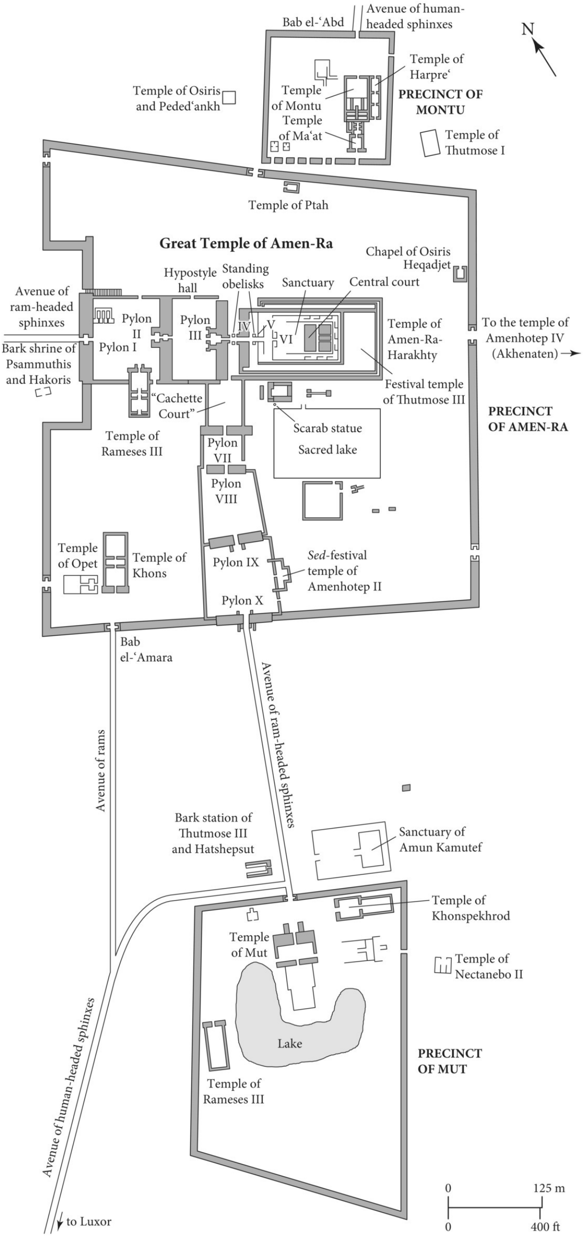

Bab el-ʿAbd
Avenue of human-headed sphinxes
N
Temple of Harpreʿ
PRECINCT OF MONTU
Temple of Osiris and Pededʿankh
Temple of Montu
Temple of Maʿat
Temple of Thutmose I
Temple of Ptah
Great Temple of Amen-Ra
Chapel of Osiris Heqadjet
Hypostyle hall
Standing obelisks
Sanctuary
Central court
Avenue of ram-headed sphinxes
Pylon II
Pylon III
IV
V
VI
Temple of Amen-Ra-Harakhty
To the temple of Amenhotep IV (Akhenaten)
Pylon I
Bark shrine of Psammuthis and Hakoris
"Cachette Court"
Festival temple of Thutmose III
PRECINCT OF AMEN-RA
Scarab statue
Sacred lake
Temple of Rameses III
Pylon VII
Pylon VIII
Temple of Opet
Temple of Khons
Pylon IX
Sed-festival temple of Amenhotep II
Pylon X
Bab el-ʿAmara
Avenue of rams
Avenue of ram-headed sphinxes
Bark station of Thutmose III and Hatshepsut
Sanctuary of Amun Kamutef
Temple of Khonspekhrod
Temple of Mut
Temple of Nectanebo II
Lake
PRECINCT OF MUT
Temple of Rameses III
Avenue of human-headed sphinxes
to Luxor
0
125 m
0
400 ft

Figure 8.13 Plan of the Temple of Karnak.

Source: Drawn by Philip Winton. Richard H. Wilkinson, *The Complete Temples of Ancient Egypt*. London and New York: Thames & Hudson, 2000, p. 155.

Kings of the early 18th Dynasty built structures at Karnak, many of which were dismantled later in the dynasty. The Fourth and Fifth Pylons in the current numbering system, erected by Thutmose I, were at the entrance to the central cult area. Hatshepsut later erected two huge obelisks between these pylons, and scenes of transporting them by barge from the Aswan quarries are found in her Deir el-Bahri temple. Thutmose III later built a wall to hide his stepmother's two obelisks, but the northern one, which is 29.5 meters high and weighs over 300 tons, still stands there today. To the south of these he added the Seventh Pylon, flanked by his own obelisks.

Thutmose III's Festival Hall at Karnak was erected to the east of the sanctuary and a large court with remains of the Middle Kingdom temple. With an entrance on the southwest of a large hall with four rows of columns, there is no axial procession through this temple to the Amen sanctuary, which is off to one side. Carved in the "Botanical Room" of Thutmose's hall were scenes of foreign fauna and flora, which have been identified by French Egyptologist Natalie Beaux. The majority of the plants depicted are from regions in the eastern Mediterranean, but there are also ones from northeast Africa and a few now found only in sub-Saharan Africa.

Major construction in the later 18th Dynasty occurred during the reigns of Amenhotep III and Horemheb. Demolishing a court of Thutmose II, Amenhotep III erected the Third Pylon, and began the Tenth Pylon, to the south of which he created an avenue of ram-headed sphinxes. Blocks from Thutmose II's court and other re-erected buildings are now in an open-air museum at Karnak. After Akhenaten's reign, *talatat* blocks from his East Karnak shrines to Aten were reused when Horemheb built the Ninth and Tenth Pylons to the south, and the Second Pylon on the west. To the east of this series of courts and pylons was the Sacred Lake (ca. 120 × 77 meters), which supplied water for temple rites. This was where priests bathed before their morning rituals. As the sun rose at dawn over the Sacred Lake, which symbolized the primeval waters, the act of creation was repeated each day.

During the 19th Dynasty, the great Hypostyle Hall was built between the Second and Third Pylons by Sety I and Rameses II (Plate 8.8). A total of 134 columns are in this hall, with capitals carved as open or closed papyrus plants. Flanking the center aisle are 12 taller columns (21 meters high), with clerestory windows on top of a lower row of columns. Exterior walls of the hall are covered with reliefs, including scenes of Sety's battles in Syria, and Rameses's Battle of Qadesh.

Later New Kingdom construction at Karnak included a triple bark shrine of Sety II's to the west of the Second Pylon, the entrance to the temple then. To the south of the entrance Rameses III built a small temple – really a very large bark stand – oriented north–south.

For much of the 20th century excavations, restoration, and architectural studies at the Temple of Karnak have been conducted by the Centre Franco-Égyptien, and the Epigraphic Survey of the Oriental Institute of the University of Chicago has recorded temple inscriptions and reliefs.

8.8 Ramessid Mortuary Temples

As in the 18th Dynasty, several kings of the Ramessid Period (19th–20th Dynasties) built mortuary temples in western Thebes which were connected by ritual to the temples of Luxor and Karnak (Figure 8.14). The first of these was built by Sety I (and finished by Rameses II) in the north at Qurna. The plan of this temple, which has been excavated by the German Archaeological Institute, Cairo, would continue to be used in more elaborated form into the 20th Dynasty. Two courts were entered through pylons (mostly built of mud-brick), leading to a portico and a columned hall, to the west of which were bark shrines for the Theban triad (Amen, Mut, and Khonsu) and the innermost sanctuary. Flanking the hypostyle hall to the south was a chapel for Sety's father Rameses I, who only ruled for two years and thus did not build his own mortuary temple, and to the north a long chapel for the sun cult. To the south of the first court was a small palace, probably for ritual use only, first seen at Thebes in the mortuary temple that was begun by Ay and usurped by Horemheb (at the end of the 18th Dynasty). In Sety's temple there were also long narrow storerooms to the north, between the outer walls of the temple proper and the enclosure walls of the temple precinct.

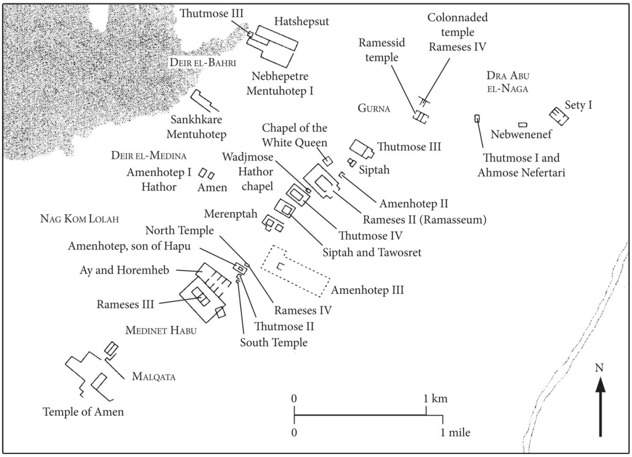

Thutmose III
Hatshepsut
Colonnaded temple Rameses IV
Ramessid temple
Deir el-Bahri
Nebhepetre Mentuhotep I
Dra Abu el-Naga
Gurna
Sety I
Sankhkare Mentuhotep
Chapel of the White Queen
Nebwenenef
Thutmose III
Deir el-Medina
Wadjmose
Siptah
Thutmose I and Ahmose Nefertari
Amenhotep I
Hathor
Amen
Hathor chapel
Amenhotep II
Rameses II (Ramasseum)
Nag Kom Lolah
Merenptah
North Temple
Thutmose IV
Amenhotep, son of Hapu
Siptah and Tawosret
Ay and Horemheb
Amenhotep III
Rameses III
Rameses IV
Medinet Habu
Thutmose II
South Temple
Malqata
Temple of Amen
0
1 km
0
1 mile
N

Figure 8.14 Map/location of the (royal) mortuary temples of western Thebes.

Source: J. Baines and *J. Malek. Cultural Atlas of Ancient Egypt*. Oxford: Andromeda, 2000, p. 91.

At Sheikh Abd el-Qurna, almost 2 kilometers to the southwest of Sety’s mortuary temple, is that of his son Rameses II, now called the Ramesseum. Enclosing an area of 210 × 178 meters, Rameses’s mortuary temple was much more grandiose than that of his father. For the first time there are two pylons made of stone, both of which had reliefs with scenes of the Battle of Qadesh. In the first court was the gigantic granite statue of the seated king, now toppled, but originally ca. 20 meters high and probably weighing over 1,000 tons (Figure 8.15). Quarried in Aswan, it is one of the largest monolithic sculptures ever erected. The main temple was actually a long parallelogram in plan, with a number of columned halls, the largest of which (hypostyle) had 48 papyriform columns. Three small columned halls led to the innermost part of the temple, now badly destroyed. A small contiguous temple on the northern side of the main temple was dedicated to Rameses’s mother Tuya and his chief wife Nefertari.

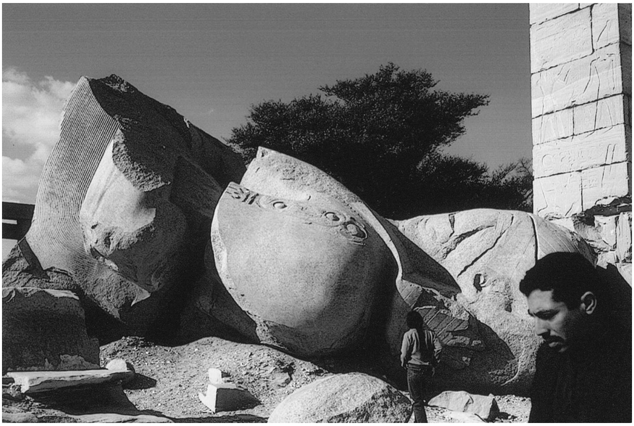


Figure 8.15 The Ramesseum with fallen colossus of Rameses II.

Although much of the Ramesseum's stonework was dismantled for reuse in later times, much of the vast network of mud-brick storerooms is still standing around three sides of the temple, some even with sections of vaulted roofs. The storerooms were probably used as granaries, although other uses would have been possible. Barry Kemp has estimated that if all of the Ramesseum storerooms were filled to capacity (an unlikely event) they could feed 17,000–20,000 people for a year. In the New Kingdom, large temples such as the Ramesseum were an important part of the economic infrastructure of the state, acting as centers of tax collection and redistribution.

The best-preserved (and partially restored) Ramessid mortuary temple was built by Rameses III at Medinet Habu (Figure 8.16). First investigated in 1859 by Auguste Mariette, the temple was systematically excavated by the Oriental Institute, University of Chicago, under the direction of Uvo Hölscher, beginning in the 1920s. Study and recording of the temple's reliefs and inscriptions were conducted by the Oriental Institute's Epigraphic Survey.

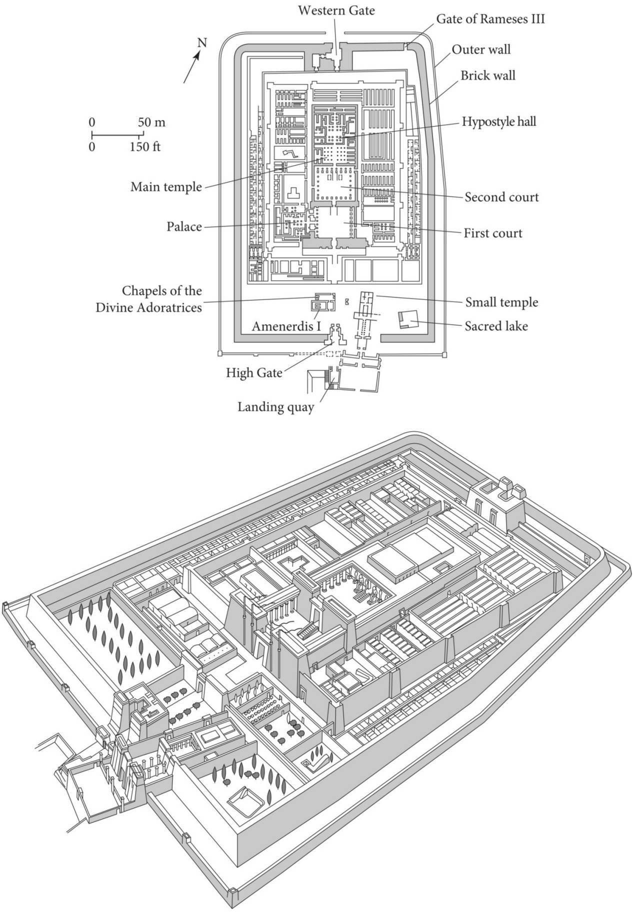

Western Gate
Gate of Rameses III
N
Outer wall
Brick wall
0
50 m
0
150 ft
Hypostyle hall
Main temple
Second court
Palace
First court
Chapels of the Divine Adoratrices
Small temple
Amenerdis I
Sacred lake
High Gate
Landing quay

Figure 8.16 Plan of the temple complex at Medinet Habu.

Source: Drawn by Philip Winton. Richard H. Wilkinson, *The Complete Temples of Ancient Egypt*. London and New York: Thames & Hudson, 2000, p. 193.

Two mud-brick walls surrounded the Medinet Habu precinct, with the northern wall abutting Horemheb's mortuary temple. Originally canals connected Rameses III's temple to the river, and a quay was built near the eastern entrance. The temple precinct was entered through the fortress-like High Gate; an earlier, 18th-Dynasty temple (the "Small Temple") to the north has a slightly different axis. There was also an elaborate western gate to the temple precinct, but this may have been only for temple personnel. Constructed of stone, the eastern High Gate was decorated with reliefs, including scenes of the king symbolically trampling on Egypt's many enemies, and in upper rooms there are "harem scenes." During the 20th Dynasty the temple was the administrative center of western Thebes, and mud-brick administrative buildings were located around the main temple structure. The many storerooms/granaries to the north and west of the main temple are also evidence of its redistributive function.

The main temple is fronted by an enormous pylon carved with scenes of the king smiting his enemies with a mace. On the temple's north wall are reliefs and inscriptions of Rameses's battles with the Libyans (regnal Years 5 and 11) and with the Sea Peoples (Year 8). To the south of the first court was a symbolic palace with a "Window of Appearances" opening from the audience hall. The palace also contained private apartments, one of which had a small throne room, bedroom, and bathroom.

Similar in plan to the Ramesseum, the main temple was entered through two porticoed courts. To the west of the second court were two hypostyle halls, one with 24 columns and the second with eight. At the rear of the temple was a bark shrine for Amen, behind which was a room that Hölscher called the "Holy of Holies," with a large false door. This part of the temple is not well preserved, but reliefs in chambers to the north and south of the innermost sanctuary identify chapels to various deities.

With unsettled conditions at the end of the New Kingdom, Medinet Habu became a fortified settlement, and tomb workers from Deir el-Medina were relocated there. Gradually much of the temple was taken over with settlement, and in the first millennium BC only the Small Temple was used for ritual of the Amen cult.

Royal and Elite Tombs

8.9 Royal Tombs in the Valley of the Kings and Valley of the Queens

For security reasons the royal tombs of the New Kingdom were in hidden locations to the west of the royal mortuary temples. The kings were actually buried in two valleys, most in the East Valley

(KV) and a few in the West Valley (WV), together known as the "Valley of the Kings." While most earlier work in the Valley of the Kings involved tomb clearance, since the 1970s the Theban Mapping Project of the American University in Cairo, under the direction of Kent Weeks, has been systematically mapping tombs there, in addition to undertaking stratigraphic excavations and tomb conservation (Figure 8.17a–d).

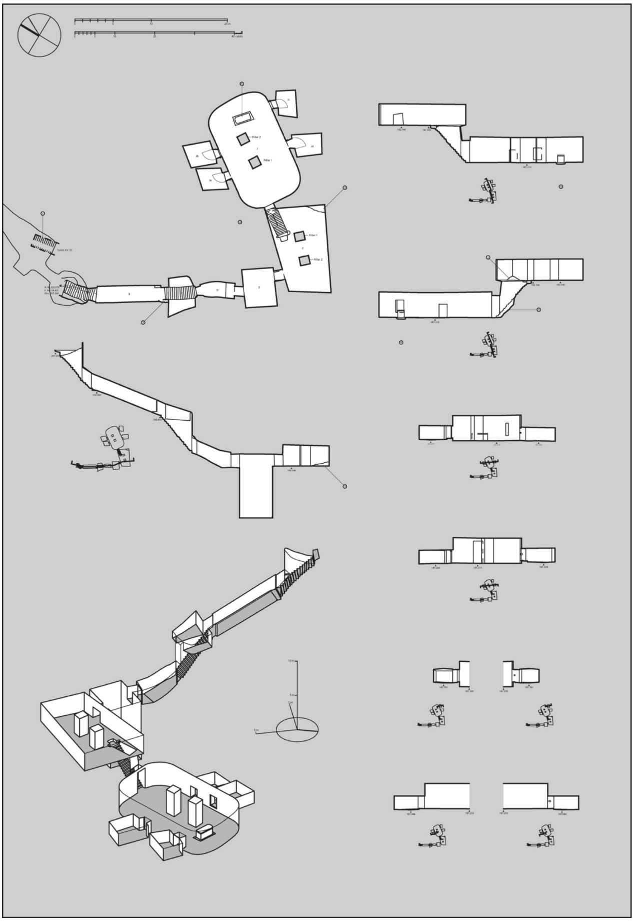


Figure 8.17(a) Theban Mapping Project plans of tombs in Valley of the Kings: Tomb of Thutmose III (KV 34, including KV 33).

Source: Theban Mapping Project. www.thebanmappingproject.com/

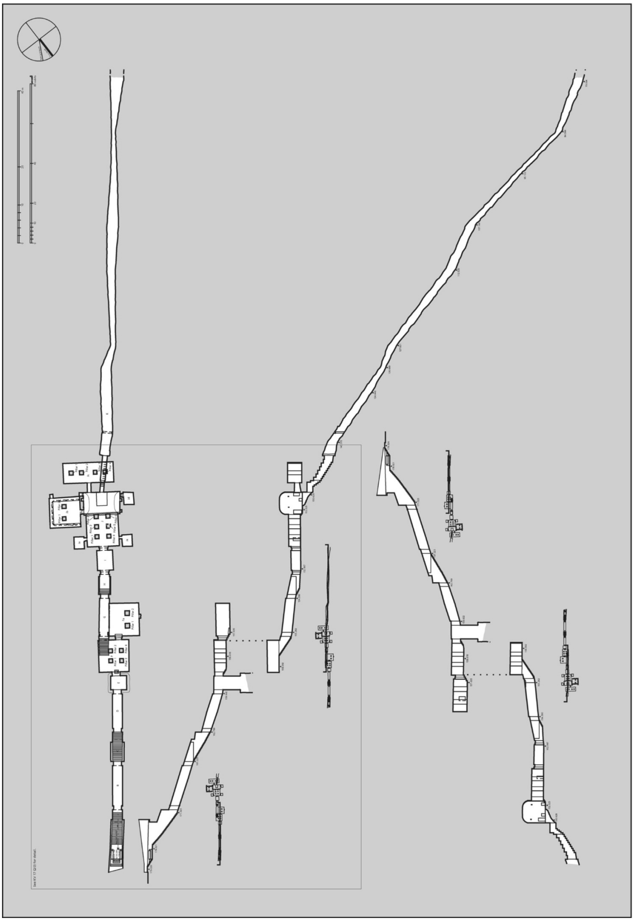

See KV 17 (2/3) for detail.

Figure 8.17(b) Theban Mapping Project plans of tombs in Valley of the Kings: Tomb of Sety I (KV 17).

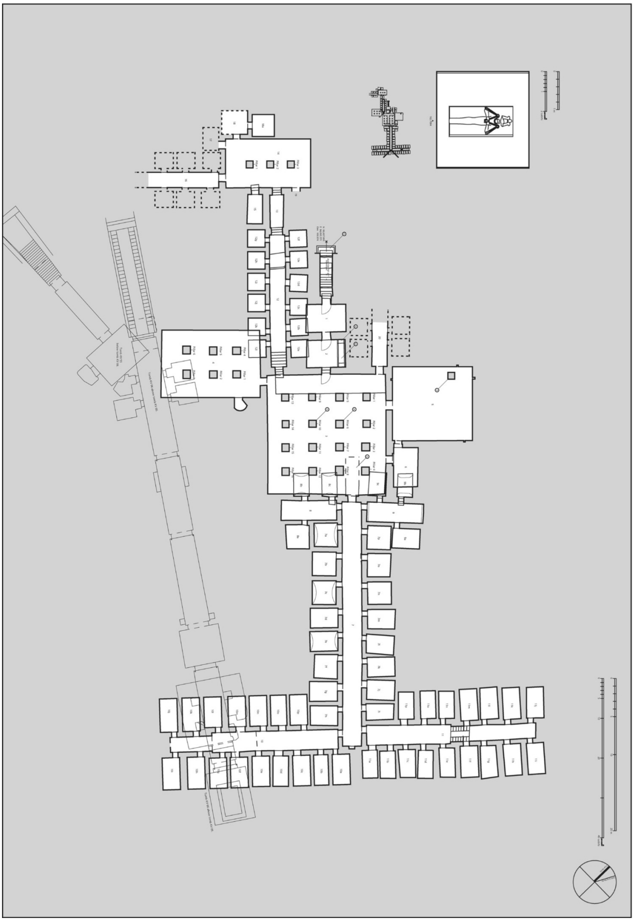


Figure 8.17(c) Theban Mapping Project plans of tombs in Valley of the Kings: Tomb of Sons of Rameses II (KV 5).

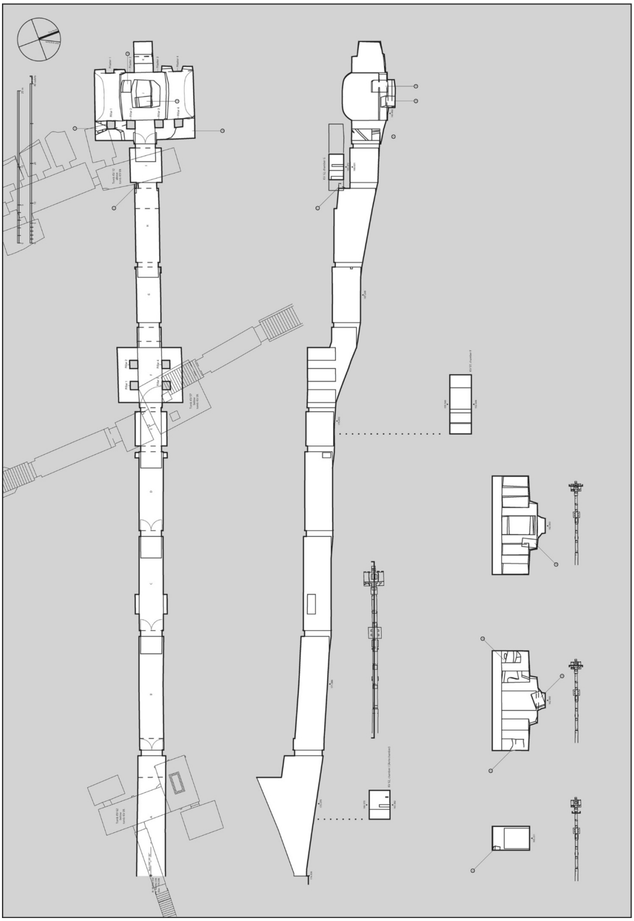


Figure 8.17(d) Theban Mapping Project plans of tombs in Valley of the Kings: Tomb of Rameses V/VI (KV 9).

With the exception of Tutankhamen's mummy, mummies of the New Kingdom kings had been robbed of their valuable jewelry and placed in two caches. One cache of royal mummies was found in side chambers in the tomb of Amenhotep II, whose stripped down mummy was in a reused coffin (not his own) in his sarcophagus. From the end of the 20th Dynasty onward the royal burials were systematically robbed, probably by the Theban rulers to provide state funds. The mummies were later rewrapped and relabeled (sometimes with other relevant information about when and where this was done), and then reburied minus their valuable jewelry in the two caches.

The other cache of royal mummies was found at Deir el-Bahri in the family tomb of Panedjem II, the High Priest of Amen-Ra, dating to the late 20th/early 21st Dynasties. In the 1870s this tomb was being looted by a local family, with artifacts sporadically going to antiquities dealers in Cairo. When this activity was revealed to the Egyptian authorities, the robbers were caught and the royal mummies (and remaining tomb goods) were shipped downriver to Cairo, where they can now be seen in the royal mummy collection of the Egyptian Museum. The 40 mummies in the Deir el-Bahri cache included kings of the 18th, 19th, and 20th Dynasties, but also royal women, and even an 18th-Dynasty "royal nurse" named Rai. The mummy of the 17th-Dynasty Theban king Taa shows evidence of a violent death, probably from battle with the Hyksos (see 7.13).

The first king with a known tomb (KV 20) in the Valley of the Kings was Thutmose I. His sarcophagus was found in another, much smaller tomb (KV 38), which was probably made for him by his grandson Thutmose III, following the demise of Hatshepsut, who probably made a second, larger burial chamber in KV 20 to include her own sarcophagus with that of her father. About 200 meters long, this tomb was entered via a long and sinuous descending passageway and series of stairs excavated in the bedrock. Hatshepsut's original tomb, before she became king, was carved into the face of a sheer cliff about 1.5 kilometers to the northwest of the Valley of the Queens. To enter this tomb, which was being robbed, Howard Carter had himself lowered by rope 42 meters down the cliff face in 1903.

Thutmose III's tomb (KV 34; Figure 8.17a) was a larger version of that of his grandfather. At the end of a series of corridors and stairs was a ritual shaft, to the north of which was a vestibule. More stairs led to the pillared burial chamber, which contained a red quartzite sarcophagus. Mortuary compositions painted on the walls of the early 18th-Dynasty royal tombs describe the voyage of Ra through the 12 hours of the night, and his rebirth at its end. Beginning with Thutmose III's tomb, scenes of the king with different deities were painted on the pillars. In the later tombs of Thutmose IV and Amenhotep III, the plan is more formal, with a long straight corridor which makes a 90° turn at a pillared hall.

Another long corridor leads to an antechamber, and turning 90° again, the pillared burial chamber is entered, off which are rectangular subsidiary rooms.

Following the Amarna Period (see 8.5), the Theban tomb of King Horemheb (KV 57) consists of a series of corridors and stairs, aligned linearly, leading to a vestibule and a six-pillared hall, with the burial chamber at a lower level. For the first time, mortuary texts and scenes are carved in relief, much of which was left unfinished. The mortuary composition known as the Book of Gates (the gates of the hours of the night through which the deceased traveled) appears for the first time in Horemheb's burial chamber.

Probably the most impressive royal tomb of the 19th Dynasty is that of Sety I (KV 17; Figure 8.17b), discovered by Giovanni Belzoni in 1817. Belzoni recorded the colored reliefs and paintings of the fully decorated tomb in watercolors, and in 1821 an exhibit of the tomb opened in London to great acclaim. The Litany of Ra, a set of invocations to the sun god, appears in this tomb, and astronomical scenes were found on the vaulted ceiling of the burial chamber. Sety's sarcophagus, which was covered with texts of the Book of Gates, was also brought to London, where it is displayed in Sir John Soane's Museum. Unfortunately since its discovery, Sety's tomb has suffered much damage, especially from flooding, which had damaged much of the tomb of Sety's son Rameses II (KV 7). Excavated into higher bedrock, the tomb of Rameses's successor (and thirteenth son), Merenptah (KV 8), was better preserved. It contained a series of four nested sarcophagi, three of granite and the innermost one of travertine, as reconstructed by Egyptologist Edwin Brock. Tomb KV 5 (Figure 8.17c), which has been investigated since 1987 by Kent Weeks, was an enormous tomb for a number of Rameses II's many sons (although two of Rameses's sons were buried in known tombs in northern Egypt). With well over 100 chambers and corridors – and possibly more yet to be found – it is the largest known rock-cut tomb in Egypt.

In the 20th Dynasty Rameses III took over the tomb of his father, Sethnakht, who only ruled for two years. The tomb (KV 11) was greatly expanded and has a new mortuary composition, the Book of the Earth, in the burial chamber. Rameses V and Rameses VI were buried in the same tomb (KV 9; Figure 8.17d), which is covered with well-preserved mortuary texts and scenes. The tomb of the last king of this dynasty, Rameses XI (KV 4), was unfinished, and mostly undecorated. This tomb did not contain a sarcophagus, and it is unlikely that the king was buried there. The tomb was cleared by an expedition of the Brooklyn Museum in 1979 and identifiable remains of burials of previous kings suggest that their mummies were taken there to be stripped of their valuables.

Two recent discoveries in the Valley of the Kings have not been of royal burials. In 2005 the Amenmesse Project, directed by Otto Schaden, found a chamber (now named KV 63), near Tutankhamen's famous tomb, which contained seven coffins and large storage jars, many still sealed, with materials used for mummification. In one of the jars were the many fragments of a broken bed, probably used in the mummification process, and Coffin G contained a small (42-centimeter-long) "coffinette" covered in gold leaf. In 2011 an undisturbed burial dating to the Third Intermediate Period, identified on the inscribed coffin as that of Nehemes-Bastet, a "Chantress of Amen," was found by a team from the University of Basel. This coffin and a small wooden stela had been buried in an earlier New Kingdom tomb, as evidenced by sherds of 18th-Dynasty pottery still there, that had been disturbed to make the later burial.

The "Valley of the Queens" ("Wadi el-Malikat" in Arabic), also in the Theban hills, was used for burials of principal queens and a number of princes and princesses in the 19th and 20th Dynasties, with two main groups of tombs dating to the reigns of Rameses II (on the northern slope) and Rameses III (on the southern slope). The Ramessid tombs were constructed and decorated by workmen from Deir el-Medina. There is also evidence of some 18th-Dynasty tombs in the valley, but they were undecorated and of non-royal persons. In the Third Intermediate Period and Late Periods robbed tombs in the Valley of the Queens were reused for family burials of local temple personnel. In Roman times the tombs were reused for burials of human and animal mummies – and piles of over 100 human mummies have been found in several tombs. The Valley of the Queens was first systematically excavated in 1903–1905 by an Italian expedition from the Egyptian Museum, Turin, under the direction of Ernesto Schiaparelli and Francesco Ballerini. Since 1984 investigations have been conducted there by the Egyptian

Center of Documentation and the French National Center for Scientific Research (CNRS).

Rameses II's mother Queen Tuya (QV 80) and several of his daughters were buried in the Valley of the Queens, but probably the best known tomb is that of his chief wife Nefertari (QV 66; Plate 8.9). Because of damage from underground water, the tomb remained closed for the late 20th century, but its beautifully painted scenes, cut in relief on the plastered walls, were restored by a joint project of the Getty Conservation Institute and the Egyptian Antiquities Organization, and it is now open. Nefertari's tomb is decorated with scenes of the queen before different deities relevant to her journey in the afterlife, and texts from the Book of Gates and the Book of the Dead (see Box 8-D), which are very rare in kings' tombs. In the early 20th Dynasty five sons and two wives of Rameses III were buried in the Valley of the Queens, with vivid painted scenes and texts found in several of these tombs, especially that of his son Amenherkhopshef (QV 55).

Box 8-C Mummification and the study of human remains

There is evidence of efforts to preserve the body before the beginning of Dynastic times, and the techniques of mummification evolved over many centuries. By New Kingdom times the mummification process achieved a high degree of preservation and some procedures became standardized for those who could afford it.

The greatest attention was given to the royal mummies, as evidenced in the two caches from Thebes of kings' mummies, although these were all stripped of the valuables originally placed within their linen wrappings. According to most accounts, the techniques of mummification reached a high point during the 21st Dynasty.

Written accounts of mummification are known from later in the first millennium BC (Herodotus and Diodorus Siculus), but mummies themselves provide evidence of the variations practiced. The first part of the mummification procedure was done on an embalming table in the *Per-nefer* – the House of Mummification. After breaking the ethnoid bone between the eye sockets, the brain was removed by a long hook. Internal organs were then removed, from the liver to the lower intestines, through an incision in the left abdomen. The lungs were also removed, but the heart (believed to be the seat of intelligence and emotions) was left in the thorax. What remained internally was then cleansed and packed with materials to preserve the form, and the entire body was covered with dry natron (sodium carbonate and sodium bicarbonate), which desiccated the remaining tissue. The lungs, liver, stomach, and intestines were embalmed and wrapped separately and then placed in four "canopic containers," each guarded by one of the four sons of Horus, whose heads were represented on the jar lids.

After about 40 days the body was taken to the *Wabet* (House of Purification) for the final procedures, which included washing it with water and filling the cavities in the brain and torso with materials soaked in resin. The abdominal incision was sewn up, the nasal cavity was filled, and sometimes pads were included under the eyelids. Treatment of the body surface included rubbing with a mixture of cedar oil and preservatives, and a final coating with hot resin. The last step in the process was wrapping the mummy in many layers of linen strips, between which protective amulets were placed. The entire process took about 70 days.

Most of what was left after mummification was muscle tissue and bones, and many infectious diseases which may have been the cause of death cannot be diagnosed from these remains. But a number of mummies have been studied with X-ray images, and tissue can be rehydrated, revealing evidence of disease such as smallpox, schistosomiasis, and intestinal parasites.

In the 1970s James Harris, an orthodontist at the University of Michigan, X-rayed the royal mummies in the Cairo Museum, finding evidence of trauma (both ante- and post-mortem), arthritis (rheumatoid and degenerative), poliomyelitis, dental abscesses, and other defects and diseases. X-rays have also revealed arteriosclerosis in the mummies of four Ramessid kings. The mummy of a priestess Makara was thought to have been buried with her child, but when X-rayed the small bundle turned out to be a baboon!

Fortuitously, age/sex information of mummies can be obtained through radiography without unwrapping them and performing autopsies, as can the placement of amulets within the linen bandages. Mummies can also been studied with CT (computed axial tomography) and MRI (magnetic resonance imaging). DNA studies of gene sequencing using mummified tissue is also being done, but with questionable results (see 8.5).

Box 8-D The Book of the Dead

Collections of mortuary texts known as the Book of the Dead bore the ancient title of Book of Going Forth by Day – for the deceased's going forth in the world of the dead. Individual examples consist of a series of spells inscribed on papyri, which were often placed in or on the coffin of the deceased.

The earliest known mortuary texts, the Pyramid Texts, which were inscribed in the late Old Kingdom, were carved on the inner walls of pyramids and had a royal context (see 6.10). In the Middle Kingdom transformed and expanded versions of these mortuary texts are found painted on coffins of private individuals (the Coffin Texts; see 7.1), but some examples of these texts have also been found on papyri. In the New Kingdom and later, mortuary texts for private individuals were written on papyri (and other media).

The goal of the spells in the Book of the Dead was to help the deceased to overcome successfully various foes and dangers in the afterlife, and the judgment before Osiris – in which the deceased's heart was weighed against the feather symbolizing *ma'at* (truth). An ideal result was an eternal existence in the "Field of Reeds" (Elysian Fields). There are hymns to Ra and Osiris. One set of spells is known as the "negative confession," in which the deceased swears to a court of 42 gods that he/she has not committed a great number of sins. The Book of the Dead was usually illustrated with a number of painted vignettes, as can be seen in the well-known New Kingdom papyrus of the scribe Any in the British Museum (Plate 8.10).

8.10 Elite Tombs at Thebes and Saqqara

In the New Kingdom, the highest officials of the kingdom were buried either in Saqqara near the seat of government (beginning with the reign of Thutmose III), or in Thebes, the most important cult center. In the west Theban hills at Sheikh Abd el-Qurna, southeast of Hatshepsut's Deir el-Bahri temple, are the rock-cut tombs of a number of officials of the earlier part of the 18th Dynasty. Later 18th-Dynasty private tombs are located to the east of the earlier ones, while a number of Ramessid tombs are between el-Khokha and Dra Abu el-Naga. Although raised relief would have been the most desirable tomb decoration, this depended on the owner's means and the quality of rock in his tomb.

Especially appealing to the modern eye are a number of painted Theban tombs belonging to officials of the 18th Dynasty. Although the upper part of the tomb of Sennefer (TT 96), who was mayor of Thebes during the reign of Amenhotep II, is inaccessible, a steep rock-cut stairway leads to two well-preserved subterranean rooms (Plate 8.11). The tomb's colorfully painted ceiling includes representations of a grape arbor. In the antechamber are scenes of processions of priests and servants carrying offerings and tomb equipment. Paintings completely cover the walls of the burial chamber, including scenes of Sennefer's funeral and mortuary rites, offerings to Osiris, the (post-mortem) pilgrimage to Abydos by boat and return to Thebes, and the worship of Osiris and Anubis with texts from Chapter 15 of the Book of the Dead. On the chamber's four pillars are scenes of Sennefer being given offerings by a woman named Merit, possibly his wife, and rituals performed by mortuary priests.

The tomb of Rekhmira (TT 100) is of unusually large size, with a transverse hall opening off an exterior courtyard, and a long high chapel ending in a false door, above which is a carved niche. But there is no burial chamber or shaft leading to one (or perhaps it has not been found). Rekhmira was Thutmose III's vizier and governor of Thebes. Scenes of religious rites pertaining to the transition to the afterlife are found in the tomb, but there are also animated scenes of craftsmen, such as sculptors, goldsmiths, carpenters, and stone masons, working for the Temple of Amen. Temple workers are shown making mud-bricks and rope, carving stone vessels, and casting bronze artifacts. In the transverse hall are the well-known scenes of foreign tribute brought to Egypt, including tribute bearers from the Aegean and Syria, the latter with gifts of horses (Figure 8.18). There are also Nubians and other Africans bringing not only gold, ebony, incense, elephant ivory, and exotic hides, but also live wild animals. A giraffe is painted with a monkey climbing up its neck, and there are leopards, and baboons – and some domesticated animals including dogs and long-horned cattle. Like other high officials, Rekhmira depicted his role in the government; but such scenes and their associated hieroglyphic texts also give insight into foreign relations and the international economy of this period when Egypt controlled vast territories abroad.

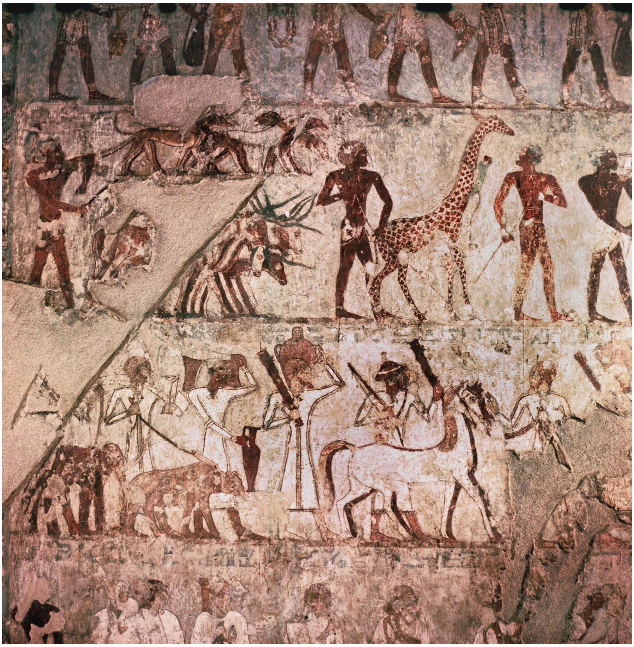


Figure 8.18 Detail of a painting in the 18th-Dynasty Theban tomb of Rekhmira (TT 100) at Sheikh Abd el-Qurna showing Nubians bringing a giraffe and long-horned cattle as tribute. In the lower register Syrians bring horses, an elephant, and a bear.

Source: Werner Forman Archive.

Agricultural scenes, of plowing and hoeing, broadcast sowing, harvesting, threshing, and winnowing, are found in a number of 18th-Dynasty tombs, including those of Nakht (TT 52) and Menna (TT 69), who were both government scribes/officials. The unfinished tomb of Ramose (TT 55), vizier and governor of Thebes during the reigns of Amenhotep III and Amenhotep IV, contains both reliefs and paintings. Demonstrating the high quality of elite art during this opulent period are the exquisite low reliefs carved on the east wall in the tomb's large hypostyle hall (with 32 columns), including scenes of a funerary banquet (Figure 8.19). There are also painted scenes of the funeral, and lines of tears run down the faces of female mourners. The decoration in this tomb changes from what might be called a classic high style of the mid-18th Dynasty to Akhenaten's Amarna style, showing the rapidity of this major cultural transition.

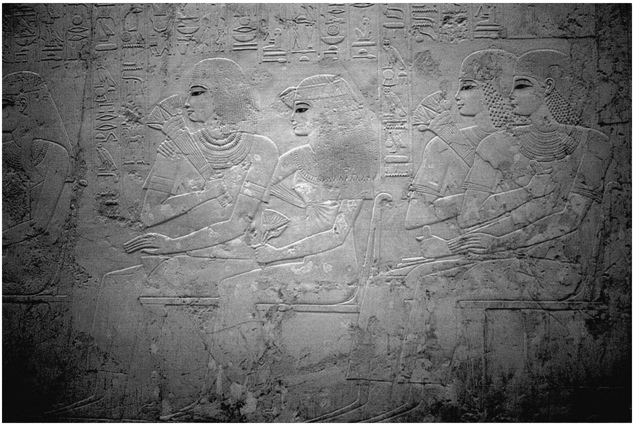


Figure 8.19 Relief of a banquet scene from the 18th-Dynasty tomb of Ramose (TT 55).

Although most of the Theban private tombs were robbed in antiquity, a few survived with a number of grave goods intact, including many items of daily life – furniture, jewelry, cosmetic artifacts, tools, and cloth – and *shawabti* (servant figurines) to serve the deceased. The burial was in a coffin with the viscera preserved in containers placed in canopic chests. The remarkable preservation of artifacts in some tombs associated with Deir el-Medina will be discussed below (see 8.11). Recent conservation efforts in tombs, such as Nigel Strudwick's work in the tomb of Senneferi (TT 99), have also uncovered artifacts, often found in fragments. In Senneferi's subterranean tomb two ivory adzes used in the Opening of the Mouth ritual have been found along with fragments of a papyrus and a linen mummy shroud inscribed with texts from the Book of the Dead. This tomb was extensively reused in post-New Kingdom times (21st through 26th Dynasties), when six shafts were cut in the tomb chapel. Thousands of fragments of later burial equipment have also been recovered.

At Saqqara high officials built a number of tombs dating to the 18th and 19th Dynasties (later ones are known from texts). Since 1976 French archaeologist Alain-Pierre Zivie has been excavating rock-cut tombs in cliffs along the eastern edge of Saqqara, in the area of the "Cemetery of Cats," where thousands of sacred cat mummies (Late Period) were left as votive offerings. The tomb of Netjerwymes, with a pillared courtyard and rock-cut chapel, belonged to an important official whom Rameses II sent as a diplomatic envoy to the Hittites. Zivie has also found the tomb of Tutankhamen's wet nurse, Maya, and that of Raïay, an official of Akhenaten, whose reliefs and texts reflect both the Atenist religion and the post-Amarna Period restoration of the mortuary cult of Osiris.

A large group of free-standing tombs at Saqqara, dating to the later 18th Dynasty (especially the post-Amarna Period) and 19th Dynasty, is in the area to the south of the Unas pyramid causeway. First located in the 19th century, tombs in this area have been systematically investigated beginning in 1975 by a joint British/Dutch expedition, and beginning in 1999 by a Dutch expedition (Leiden Museum and Leiden University).

Resembling small-scale temples, the late 18th-Dynasty tombs consisted of a walled mud-brick superstructure with one or two courtyards and chapels, covered with finely carved low relief in limestone. Earlier Old Kingdom mastabas in this area were dismantled, and their subterranean burial chambers were often remodeled and reused. Tombs include those of General Horemheb before he became the last ruler of the 18th Dynasty, and Maya, Tutankhamen's Overseer of the Treasury (Figure 8.20). Reliefs of the reign of Akhenaten in the tomb of Meryneith, Steward of the Temple of Aten in Memphis, were destroyed in the post-Amarna Period.

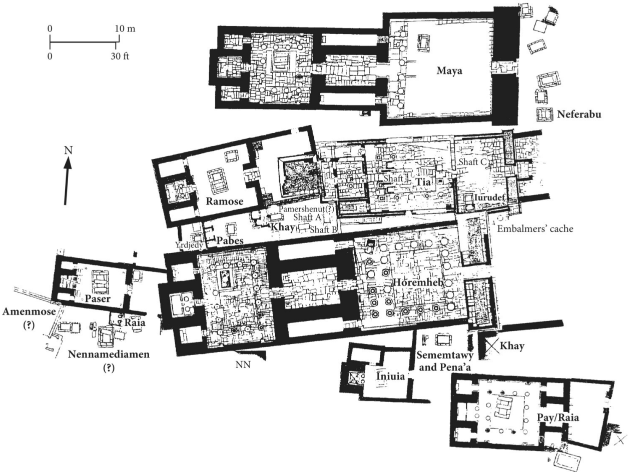

0
10 m
0
30 ft
N
Maya
Neferabu
Ramose
Shaft C
Shaft
Tia
Iurudef
Pamershenut(?)
Shaft A
Khay
Shaft B
Embalmers' cache
Yrdjedy
Pabes
Paser
Horemheb
Amenmose
(?)
Raia
Nennamediamen
(?)
NN
Khay
Sememtawy
and Pena'a
Iniuia
Pay/Raia

Figure 8.20 Plan of several New Kingdom tombs at Saqqara,

including those of Horemheb and Maya.

Source: Ian Shaw (ed.), *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000, p. 288.

State Towns and Settlements

8.11 The Workmen’s Village and Tombs at Deir el-Medina

Deir el-Medina, by far the best preserved settlement in the Theban region, was where workmen employed in the royal tombs in the Valley of the Kings lived with their families. Begun in the early 18th Dynasty, perhaps during the reign of Amenhotep I, the village was occupied until the late New Kingdom, with the exception of the Amarna Period, when it was partly or wholly abandoned. A number of artifacts from the site were sold to collectors in the 19th century, and in 1886 the spectacular unrobbed tomb of the workman Sennedjem (TT 1) was found and subsequently cleared by the Egyptian Antiquities Service. Excavations were later conducted at the village site, from 1906 to 1909 by Ernesto Schiaparelli (Egyptian Museum, Turin). German Egyptologist Georg Möller briefly worked at the site in 1913. After World War I (and until 1951) excavations were conducted there by the French Archaeological Institute, Cairo (IFAO), under the direction of Bernard Bruyère, with some subsequent reinvestigation of the site.

Remains now visible at the site date to the 19th Dynasty, when the settlement was expanded. With 68 houses in the final phase, the village covered ca. 5,600 square meters. The settlement was walled in stone, with one entrance on the north, outside of which a few houses (and possibly administrative buildings) were located. A second gate on the west side led to the principal village cemetery. The long, narrow houses, made of mud-brick with lower walls and foundations of stone, were laid out along a main north–south street and several east–west alleys (Figure 8.21).

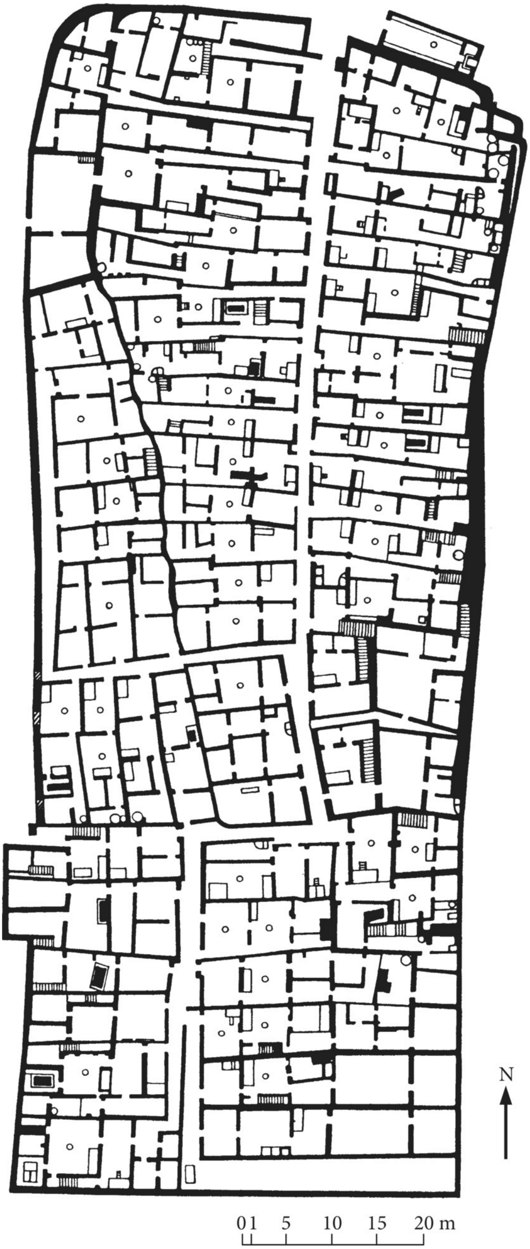


Figure 8.21 Plan of the village of Deir el-Medina.

Source: A. G. Mc Dowell, *Village Life in Ancient Egypt: Laundry Lists and Love Songs*. Oxford: Oxford University

Press, 1999, p. xvii.

Village houses were entered through wooden doors framed in wood or limestone, and the lintels were sometimes inscribed with the house owner's name. Although there is evidence of remodeling (as households grew and/or changed in composition), a fairly standardized house plan is seen, usually with four to six rooms aligned linearly, including an open-air back court where the cooking and food preparation were done. Houses varied in size from 40 to 120 square meters. One of the inner rooms usually had a single wooden column resting on a stone base, which supported a higher roof and clerestory windows that would have let in light and air. The houses were one story high, with a stairway to the roofed area in the back court. The roof would have provided additional space for household activities, including sleeping during the warmer months.

In the first room of a number of houses (opening onto the street) Bruyère excavated what he called a *lit clos*, which may have been a bed structure used for giving birth. But this interpretation is problematic: ancient Egyptian women gave birth in a squatting position, not lying down on beds. (See 7.7 for evidence excavated at the South Abydos settlement of a "birthing brick.") Lynn Meskell, an anthropologist/archaeologist at Stanford University, suggests that the first room in the house was a shrine and the cultic domain of household women. Non-domestic artifacts in this room, such as offering tables, statues, and stelae, support Meskell's hypothesis, and the walls were often decorated with images of the male dwarf god Bes, a protective household deity. Meskell also proposes that the larger columned room, which she calls the "divan room" because such structures were found in this location, was the domain of men's relations. Sometimes wall decoration in this room included painted false doors, and the presence of other ritual artifacts suggests a focus of (male) ancestor ritual. In such small houses, however, it would be unlikely that any space was used exclusively for a single purpose.

Some of the 18th-Dynasty workmen's tombs were to the east of the village, and cut into the bedrock below these tombs were many pits containing the burials of infants, neonates, and fetuses. Burials of adolescents were located midway between the infant and adult burials, suggesting spatial differentiation in the cemetery by age.

The great number of infant burials points to a high rate of infant mortality (which is found in almost all premodern populations), as well as social recognition symbolized by the intentional burial in a cemetery of even the youngest villagers.

On the valley slopes to the west of the village were tombs of the 19th and 20th Dynasties. The general plan of these tombs consists of a pylon gate, walled courtyard, and chapel, either a rock-cut or free-standing vaulted structure, with a small mud-brick pyramid above. The subterranean burial chambers were entered from a vertical shaft in the courtyard or chapel. The tomb of Sennedjem contained 20 burials of three generations of his family, but only nine were in coffins, including those of Sennedjem, his wife, and their sons- and daughters-in-law (Plate 8.12). Whereas this tomb contained tools and household items (including metal razors), and real food (breads, eggs, dates, dom palm nuts, and emmer wheat), the earlier 18th-Dynasty tombs in the eastern cemetery had more furniture (beds, chairs, boxes, and baskets). The later Ramessid Period tombs also contained more ritual equipment for the afterlife, such as amulets, *shawabti*s, and tools for the Opening of the Mouth, which Meskell thinks reflects a shift of focus from the world of the living to the world of the afterlife.

Construction and decoration of the Deir el-Medina tombs, and tomb goods, would have been obtained by barter and exchange of work and crafts done by the workers on their days off. Although these burials could be considered “middle class,” they belonged to a special group of royal artisans and their families, and it is unclear how typical they were of burials below the level of government officials.

To the northeast of the village is a Ptolemaic temple of the goddess Hathor, built over an earlier stone temple to the goddess from the reign of Rameses II. Next to this temple are the remains of an earlier Hathor temple built by Sety I. Also to the north of the village are a number of mud-brick shrines, consisting of a walled court, one or two columned halls, and a sanctuary usually with three cult chambers for the cult statues. Another group of shrines cut in the bedrock is found on the route from the Deir el-Medina village to the Valley of the Queens, where village workmen were also employed. Associated with these cave shrines, which were dedicated the god Ptah and the snake goddess Meresger, are stelae of the workmen and their officials.

Box 8-E Daily life of the Deir el-Medina workers

Because of a wealth of texts associated with the workmen’s village at Deir el-Medina, much more is known about life there than would be evident solely from the archaeological evidence. Texts include official documents on papyri (generally fragmented), and thousands of ostraca, made of limestone chips or potsherds.

The Egyptian week consisted of ten days and workmen in the royal tomb spent eight of those days there, camping at night in huts at the top of the ridge along the path to the Valley of the Kings, possibly to be in closer proximity to their work site. The Scribe of the Tomb, appointed by the vizier, issued rations to the workmen and kept daily records of attendance and absence, which, aside from special holidays, could be granted for sickness and sometimes for personal reasons, including work on the family tomb. In the royal tomb the workforce was divided into right and left crews, each headed by a foreman and three other officials/ assistants. Workmen’s tools and materials were supplied by the state and there is even a record of turning in copper chisels to be resharpened or reforged.

Because of the villagers’ employment and state support, the village was a very atypical one, which can also be seen in the high rate of literacy among the male workers there. Tomb draftsmen, officials, and scribes for the many different records kept in the village all needed to know how to read and write, but there is also evidence that some ordinary workmen learned these skills. Although textual evidence is lacking for a school per se, many texts found at Deir el-Medina were learners’ copies made of various works – including religious hymns, classical works of Middle Kingdom literature, and New Kingdom instructional literature. Papyri from a private library belonging to a scribe and his descendants were found in the west cemetery, and other such collections probably existed.

There are records from the late 20th Dynasty that some villagers were involved in very serious state crimes – the robbing of royal tombs. Although local cases were heard by a village court, criminal cases were tried elsewhere, including the vizier's office. Some cases were also decided by oracle – of the deified King Amenhotep I. Probably the most egregious crimes were committed by a man named Paneb in the late 19th Dynasty. Threatening his adopted father, a work foreman, Paneb may have murdered him and then became foreman through bribes. As foreman, Paneb stole stone from the royal tomb and misappropriated the time of workmen for his own family tomb. He was also accused of robbing villagers' tombs and sleeping with the wives of several workmen while his son slept with their daughters. But justice eventually triumphed and Paneb and his son were sent off to do hard labor in mines in the Wadi Hammamat (presumably until they died there).

For an excellent presentation and translation of the Deir el-Medina textual information, see Andrea Mc Dowell's *Village Life in Ancient Egypt* (1999).

Box 8-F Love songs

A few of the Ramessid ostraca from Deir el-Medina (and a vase in the Cairo Museum) contain parts of texts known as the "Love Songs." More complete versions of these songs/poems have been found on three papyri: the Papyrus Chester Beatty I and the Papyrus Harris 500 in the British Museum, and the Turin 1966 Papyrus in the Egyptian Museum, Turin. While many inscriptions of the New Kingdom are from mortuary or temple contexts, the Love Songs provide insights into the feelings of the ancient Egyptians, outside the spheres of ritual and work.

Translated as poems (which may have been sung), the Love Songs were taken from what was probably a large body of secular lyric poetry. They transcend the cultural and temporal gap between ancient Egypt and the modern world, describing feelings of longing, lust, ecstasy, romantic and erotic love, and physical desire – the same emotions that we all have felt and that are expressed in contemporary songs and poems.

The Love Songs celebrate the fullness of life, contradicting the mistaken notion that the ancient Egyptians were obsessed with death and preparations for the afterlife. Images in the poems are of life in the Nile Valley – in papyrus marshes full of flowers and colorful birds, and in villages and gardens with palm and sycamore trees. Fragrances of flowers, perfumes, and incense are described, as are the sweet tastes of wine, honey, and dates – enriching the poems with sensual delights.

An example of a song from the Papyrus Harris 500, translated by Michael Fox (1985), is included here:

Your love is mixed in my body,
   like …
[like honey(?)] mixed with water,
   like mandragoras* in which gum is mixed,
      like the blending of dough with …
Hasten to see your sister,
   Like a horse (dashing) [onto a battle]field,
like a …
   … its plants
while heaven gives her love,
   like the coming of a soldier(?),
   like …

*The word for some kind of fruit is translated as “mandragoras,” a kind of aphrodisiac, but this translation is not certain.

All of the villagers’ basic needs, including clothing, firewood, water, and food (emmer wheat and barley, meat, fish, and vegetables) were supplied by the state as payment, on a monthly basis. Since the village lacked a source of water, even the villagers’ laundry was state provided: laundry was picked up in the village and washed by launderers along the Nile. An attempt to locate well water near the village is seen in the excavation of the Great Pit, to the east of the Ptolemaic temple. Entered by a spiraling stairway, the pit was excavated to ca. 50 meters deep, but groundwater was never reached and the work was abandoned.

Like tomb goods, many household items, especially furniture, were made by village craftsmen in their spare time and obtained by villagers through barter and exchange. Goods were also obtained by reciprocal gift giving and loans. Such transactions occurred 500 or more years before coinage was introduced into Egypt, but Egyptologist J. J. Janssen’s studies indicate a more sophisticated economic system in operation in the village, where a wide variety of transactions are shown to have occurred, including set prices, loans, and credit.

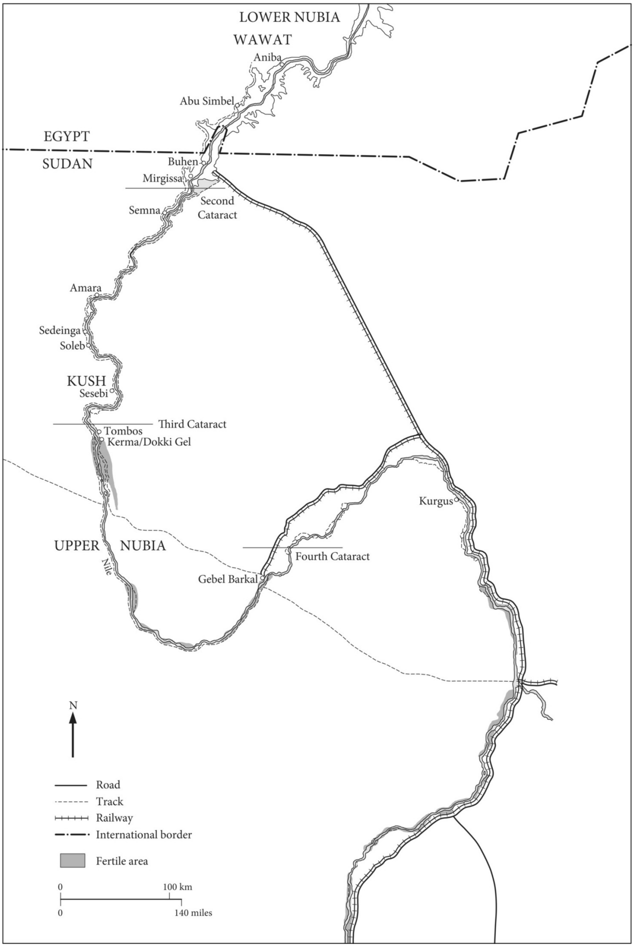
In order to study the price history of the period, Janssen compiled texts from Deir el-Medina ostraca (and some papyri) which contained economic information – about the value of many types of food, animals, raw materials, and manufactured goods (such as clothing, furniture, containers, tools, and tomb goods). It was not possible to date some of these texts, but the ones that could be dated were mostly from the 20th Dynasty, some of which could be assigned to specific reigns. There were also some texts of 19th Dynasty date. Prices were calculated in terms of *deben* (standardized weights) of copper, but also silver and (rarely) gold. Another system of prices was to give an equivalent value for a commodity in a measure of grain. With such data, Janssen could then demonstrate a sharp rise in the prices of grain (emmer wheat and barley) in the mid-20th Dynasty, with those prices halved by the end of the dynasty.

8.12 Nubian Temple Towns

Outside of Egypt proper, there is evidence of extensive New Kingdom settlements, as stone temples were built throughout Nubia. With the Kerma kingdom vanquished in the early New Kingdom, Egyptian control of Nubia expanded southward from Wawat (Lower Nubia) beyond the Second Cataract into Kush (Upper Nubia). Most of the Middle Kingdom forts in Nubia were restored, but some were abandoned after the conquest of Kush. Fortresses which continued to be occupied, such as at Buhen, Mirgissa, and Semna, were extensively renovated, including the construction of new temples, and at Buhen a large settlement expanded outside of the earlier walls. Except during the short reign of Tutankhamen, Nubia was administered by high officials in fortified temple towns – Lower Nubia from Aniba, a fort built to the north of the Second Cataract during the Middle Kingdom, and the whole region between the Second and Third Cataracts in Upper Nubia from Amara, in a region where agriculture could sustain the town's inhabitants. Extra-mural towns also developed later around these two administrative temple centers.

At Tombos, 10 kilometers downstream from Kerma, a town was established with an associated cemetery containing ten pyramid tombs, similar in style to those known in western Thebes in the New Kingdom, which were built for high-status Egyptian officials living there. Excavations by Stuart Tyson Smith have also revealed a middle-status cemetery with Egyptian-style burials – with Egyptian grave goods and evidence of mummification. But Smith has also excavated four Nubian-style burials of women at Tombos. Although most of the associated grave goods were Egyptian, these four burials were in flexed positions with the head to the west – as opposed to the Egyptian burials there in which the bodies were extended and lying on the back with the head to the east. This evidence suggests that although Tombos was an Egyptian town with Egyptians, including high-status officials, living there, some of the population consisted of Nubians who were able to symbolically retain some of their beliefs associated with death and burial, as well as their ethnic identity.

Inscriptions of two Thutmosid kings (I and III) have been found between the Fourth and Fifth Cataracts (at Kurgus upstream of Abu Hamed), but more extensive evidence in the far south is located downstream from the Fourth Cataract at Gebel Barkal, where Thutmose III set up a victory stela and erected a temple to the god Amen. During Akhenaten's reign, Amen's name was erased from earlier inscriptions and *talatat* blocks have been found at Dokki Gel, near Kerma, where an Aten temple had been erected. In the post-Amarna Period a new Amen temple (B 500, beneath which was Thutmose III's temple) was begun at Gebel Barkal and was later greatly expanded by Sety I and Rameses II. Inscriptions mention a settlement and fort at Gebel Barkal, but remains of these have not been located.


LOWER NUBIA
WAWAT
Aniba
Abu Simbel
EGYPT
SUDAN
Buhen
Mirgissa
Second Cataract
Semna
Amara
Sedeinga
Soleb
KUSH
Sesebi
Third Cataract
Tombos
Kerma/Dokki Gel
Kurgus
UPPER NUBIA
Nile
Fourth Cataract
Gebel Barkal
N
Road
Track
Railway
International border
Fertile area
0
100 km
0
140 miles

Map 8.5 Sites and regions in Upper and Lower Nubia during the New Kingdom.

The construction of imposing temples in Nubia helped to reinforce ideological control there through the cults of Egyptian gods. Although a number of temples were built in or near fortified towns in Nubia, some temples, such as Rameses II’s famous rock-cut monument at Abu Simbel, have no evidence of nearby settlements (Figure 8.22; Plate 8.13). In the 1960s this temple was rescued from flooding by an enormous UNESCO project when the Aswan High Dam was built. The living rock from which the temple was carved, including a façade with four seated colossal statues of the king (21 meters high), was sawed up into huge blocks and reassembled on higher ground, where the artificial mountain behind it is held up by a huge interior concrete dome. The smaller rock-cut temple to the north, with four standing statues of Rameses II and two of his chief queen Nefertari, was also rescued. Some of the reliefs in the main temple depict Rameses’s campaigns in Syria and Nubia and are symbolic of the role of the Egyptian king abroad.

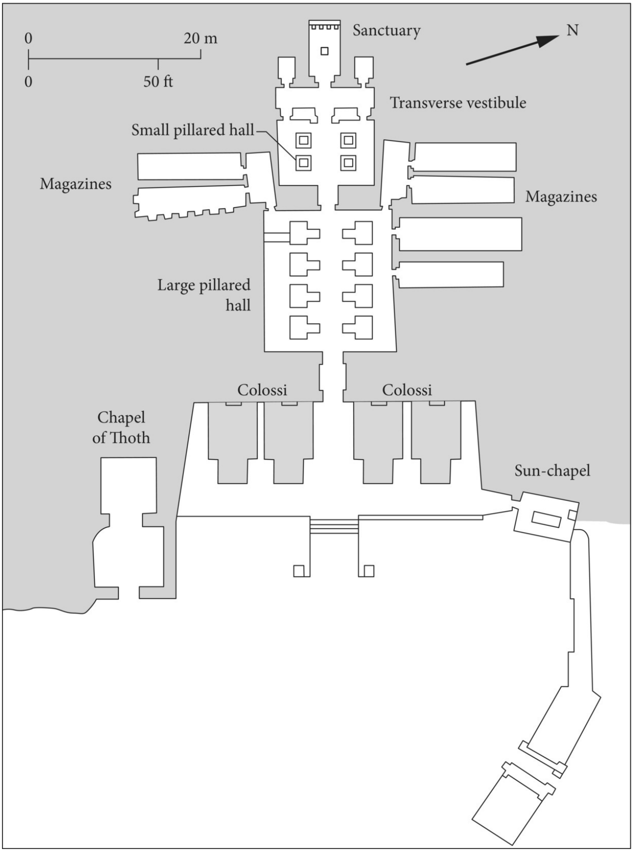

0
20 m
0
50 ft
Sanctuary
N
Transverse vestibule
Small pillared hall
Magazines
Magazines
Large pillared hall
Colossi
Colossi
Chapel of Thoth
Sun-chapel

Figure 8.22 Plan of Rameses II's rock-cut temple at Abu Simbel in Lower Nubia.

Source: Drawn by Philip Winton. Richard H. Wilkinson, *The Complete Temples of Ancient Egypt*. London and New York: Thames & Hudson, 2000, p. 223.

More recent work on temple towns in northern Sudan includes re-examination of the walled town of Sesebi (ca. 100 kilomters downstream from the Third Cataract), which was constructed early in the reign of Akhenaten. The town, which includes two temples, blocks of storerooms, and domestic structures, as well as cemeteries outside the town wall, was first excavated by the Egypt Exploration Society in the 1930s. The new project (University of Cambridge), which is directed by Kate Spence and Pamela Rose, includes delineating the plan and decoration of the main temple with its well-preserved crypt. Beneath Akhenaten's temple, there is evidence of an earlier construction, and Napatan ceramics (see 9.4) within the town demonstrate later reoccupation in the first millennium BC.

At Amara West, which was also excavated earlier by the Egypt Exploration Society, Neal Spencer (British Museum) has been directing new excavations and survey of a well-preserved town of the early Ramessid period. The 2008 magnetomer survey revealed a previously unknown western suburb with some large villas. When excavated, one of the villas contained rooms for large-scale grain processing and bread making. Within the walled town there are similar buildings to those found at Sesebi: a temple, large-scale storage facilities and houses. Names/titles found on door jambs and lintels from a large house within the town have identified it as the residence of the Egyptian deputy of Kush.

Egyptian control of Nubia ceased at the end of the New Kingdom. Gebel Barkal would later become the nucleus of an indigenous kingdom, the Napatan state, which arose there in the 10th–9th centuries BC. By the 8th century BC kings of this state became the rulers of both Egypt and Nubia.

Chapter 9
The Third Intermediate Period and Late Period

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9.1 The Third Intermediate Period: Overview

9.2 The Late Period: Overview

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9.6 Saqqara: The Serapeum and Animal Cults

9.7 Some High-Status Tombs of the Third Intermediate Period and Late Period

9.8 Tell el-Maskhuta and Tell el-Herr

Introduction

With the Third Intermediate Period there was a shift of control to the Delta. The unstable political conditions of the times are reflected in a lack of much archaeological evidence there, but later rulers also appropriated monuments of this period for their own buildings, which has also limited the surviving evidence. Tanis became the capital of the 21st and 22nd Dynasties, while the independence of a Theban polity centered on the estate of Amen of Karnak waxed and waned. In the later New Kingdom the Delta had become home to increasing numbers of Libyans, and the kings of the 22nd, 23rd, and 24th Dynasties were of Libyan descent (as were some of the kings of the 21st Dynasty). With these dynasties, which overlapped in time, political fragmentation continued in Middle Egypt and the Delta. Egypt was finally reunified in the 25th Dynasty – by Kushite rulers from Upper Nubia.

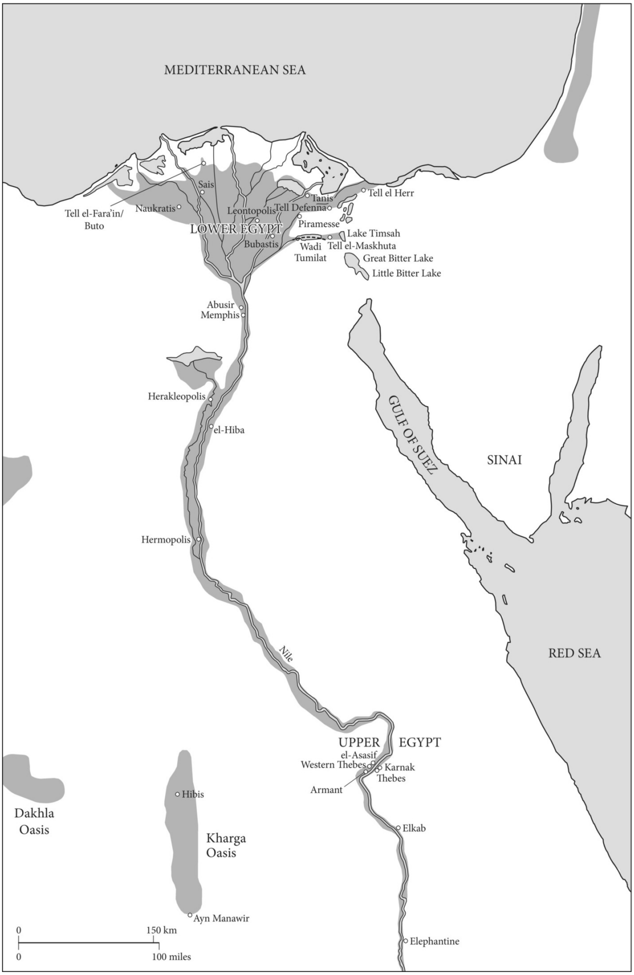
The last pharaonic dynasties (26th–31st) are grouped together in what is called the Late Period (among which the 27th and 31st Dynasties were times of Persian domination). The 26th Dynasty, the origins of which were at Sais in the Delta, was a period of indigenous rule, economic prosperity, and expanding trade and military activity abroad – which are also visible in the art and monuments of this period. But Egypt during much of the first millennium BC faced successive invasions by foreign powers – Nubians, Assyrians, Persians, Macedonian Greeks, and finally Romans. Although pharaonic culture and ideology are evident well into the 4th–5th centuries AD, the rulers of Egypt were outsiders.

9.1 The Third Intermediate Period: Overview

The Third Intermediate Period represents a departure from traditional pharaonic rule of the Early Dynastic Period, and the Old, Middle, and New Kingdoms – and control of the entire country by a ruling dynasty of Egyptian kings. Although the rulers in Thebes recognized the 21st-Dynasty kings at Tanis in the northeastern Delta, there was divided rule between the north and south. A border was established at el-Hiba in Middle Egypt, where fortresses were built by the Theban rulers whose policies were sanctioned by oracles of the Theban gods. Egypt no longer controlled an empire in southwest Asia or in Nubia. The new political order is visible in the *Tale of Wenamen*, a fictional work in which an agent of the Temple of Amen at Karnak is dispatched to Byblos to obtain cedar for the god's bark.

The petty states along the eastern Mediterranean were now independent of Egyptian control and Wenamen's troubles exemplify Egypt's greatly reduced power there. The tale also reflects the divided state of Egypt, between the theocratic power of Herihor in Thebes and King Smendes in Tanis. The diminished state of the royal ancestors can also be seen in the evidence at Thebes: from the end of the 20th Dynasty onward riches in the Theban tombs of the New Kingdom pharaohs were removed and the stripped-down royal mummies were reburied in caches – all of which was possibly sanctioned by the rulers of Thebes. Many of the New Kingdom private tombs at Thebes which had been plundered in the late 20th Dynasty were reused for family burials – with a reduced number of grave goods compared to the New Kingdom ones. With the end of royal burials in the Valley of the Kings the Deir el-Medina workmen's community was closed, and in Tanis kings were buried within a massive temple complex that was protected within the walled city.

The 22nd, 23rd, and 24th Dynasties, located in different cities in the Delta, overlap in time, and writing a history of this period is problematic given a scarcity of king lists. Names and regnal years of these kings have been pieced together from inscriptions, but many sites in the Delta from which such information has been obtained have not been well preserved. The origins of Smendes, the first king of the 21st Dynasty, are unknown, and the other Delta rulers of this period were of Libyan descent. Kings of the 25th Dynasty were Kushites from Napata in Upper Nubia, reversing a 2,000-year tradition of Egyptian control of Nubia – with Nubian control of Egypt.


MEDITERRANEAN SEA
Sais
Tell el-Fara'in/
Buto
Naukratis
Leontopolis
Tell Defenna
Tanis
Tell el Herr
Piramesse
LOWER EGYPT
Bubastis
Lake Timsah
Wadi
Tumilat
Tell el-Maskhuta
Great Bitter Lake
Little Bitter Lake
Abusir
Memphis
Herakleopolis
el-Hiba
GULF OF SUEZ
SINAI
Hermopolis
Nile
RED SEA
UPPER EGYPT
el-Asasif
Western Thebes
Karnak
Thebes
Armant
Hibis
Dakhla
Oasis
Kharga
Oasis
Elkab
Ayn Manawir
0
150 km
0
100 miles
Elephantine

Map 9.1 Sites in Egypt, Sinai, and the Western Desert during the Third Intermediate Period and Late Period.

The geographic importance of the Delta was already evident in the 19th Dynasty when Rameses II built a new capital there (Piramesse). From the Third Intermediate Period onward, with the exception of the Kushite Dynasty, power and control in Egypt increasingly focused on the Delta. The 21st-Dynasty kings built a new royal city at Tanis, and to facilitate this some earlier monuments were removed from Piramesse and elsewhere in the north and re-erected at Tanis. Although Rameses III had successfully fought Libyan forces twice, there is textual evidence that conquered Libyans were assigned to military settlements in Egypt. By the end of the New Kingdom there were many Libyans living in northern Egypt, especially former mercenaries in the western Delta. Osorkon the Elder, son of the chief of the Meshwesh (a Libyan tribe), became king ca. 984 BC and the 21st Dynasty ended with the rule of a Theban high priest, Psusennes II. The Libyan Sheshonq I, whose family was in Bubastis, became the first king of the 22nd Dynasty – legitimized by his marriage to Psusennes II's daughter and descent from his uncle, Osorkon the Elder. Sheshonq, who continued the kingship at Tanis, named his son high priest of Amen and commander of the army, and from this point onward kings in the north sought to curtail Theban power. Reasserting the role of the Egyptian king, Sheshonq erected a number of monuments, including the so-called Bubastite Portal at the Temple of Karnak where the king's successful campaign against the states of Israel and Judah is recorded – which is also mentioned in the Old Testament (1 Kings 14:25–26). But Egyptian expansion into Palestine ended with Sheshonq's death not long after this military campaign.

Increasing political fragmentation occurred throughout Upper and Lower Egypt during the 22nd Dynasty as many provincial offices became hereditary. By the reign of Sheshonq II the 23rd Dynasty was an independent polity in the Delta. Later other semi-autonomous petty kingdoms also emerged: at Bubastis and Leontopolis in the Delta, and at Herakleopolis and Hermopolis in Middle Egypt. There were also other independent groups, including four Great Chiefs of the Ma/Meshwesh and the "Prince of the West" at Sais. Not acknowledging any one king, Thebes remained the major power base in the south. One result of decentralization was more socio-political instability. Rameses III's mortuary temple at Medinet Habu had already become a fortified settlement during the civil war at the end of the New Kingdom, and evidence of mud-brick fortresses of this period has been found in Middle and Upper Egypt.

Little is known about Nubia after the New Kingdom because Egyptian control there ceased, as did written inscriptions. Sometime between the 11th and 9th centuries BC an indigenous polity arose in Upper Nubia, centered at Napata/Gebel Barkal, downstream from the Fourth Cataract, where Thutmose III had built an Amen temple. This polity became the second kingdom of Kush, with all of Nubia eventually under its control. The 25th Dynasty began with Kushite expansion northward; the kings of this dynasty controlled both Nubia and most of Egypt during a century of much warfare – between the Kushites and Libyan rulers in northern Egypt, and later between the forces of the Kushites and Egyptians and the invading Assyrians.

The Kushite conquest of Egypt began under Kashta in the mid-8th century BC, and his son Piy conquered Memphis. In Thebes Piy's sister Amenirdis I became the God's Wife of Amen, one of the most powerful offices there. But Piy returned to Nubia and his successor Shabaqo had to reconquer Egypt when local rulers in the Delta began to expand their territorial control.

For the most part the Kushite kings were nominal rulers of Egypt, who controlled Egypt because of their military might but left many local rulers in place. The Kushites also took an interest in southwest Asia and in 701 BC an army of Egyptians and Nubians was sent to Palestine to support Hezekiah of Judah against the Assyrian army under Sennacherib. Although Sennacherib claims to have defeated the Egyptian and Nubian army, their intervention may have helped the Hebrew kingdom to survive and the Assyrians withdrew from their siege of Jerusalem. During the reign of Taharqo (690–664 BC), Egypt was invaded three times by the Assyrians and the Kushite king retreated to Nubia, where he died. His successor Tanutamani invaded Egypt, but Assyrian retaliation was severe. Thebes was sacked at this time and Tanutamani withdrew to Nubia for good.

During the 25th Dynasty Memphis became the Kushite royal seat in Egypt and several kings built monuments there. Both in Egypt and Nubia Kushite kings built Egyptian-style temples, with their walls inscribed in Egyptian hieroglyphs. At Karnak Taharqo's large kiosk is found in the temple's first court, and next to the northwest corner of the sacred lake he built a chapel with inscribed subterranean chambers.

But the Kushite kings of the 25th Dynasty and their successors were buried in Upper Nubia. Before the Egyptian conquest Kushite kings were buried in a cemetery at el-Kurru, near Gebel Barkal, where the earliest high-status tombs were circular tumuli with contracted burials on beds – as in the centuries-earlier royal burials at Kerma. But Piy’s tomb at el-Kurru was a steep-sided pyramid. Most of the later Napatan kings, beginning with Taharqo, were buried in pyramids at Nuri, on the other side of the river. The kings’ bodies were mummified and placed in coffins, and royal mortuary compositions used by New Kingdom kings were painted in their burial chambers.

The Kushite pyramids, with chapels on the east side, are probably the most visible mortuary evidence of Egyptian acculturation by these kings, who worshipped Egyptian gods, especially Amen and Ptah, as well as non-Egyptian ones. But some Nubian beliefs were retained, such as the horse burials associated with Kushite royal burials. Kushite kings were often shown wearing a leather cap (not an Egyptian crown, see Figure 9.1), surmounted not by the heads of a vulture and cobra, which were symbols of Egyptian kingship (for example, on the gold funerary mask of Tutankhamen), but by two cobras (the double uraeus). Thus Egyptian royal symbols – and beliefs – were selectively adopted by the Kushite kings and transformed within their own distinctive culture.

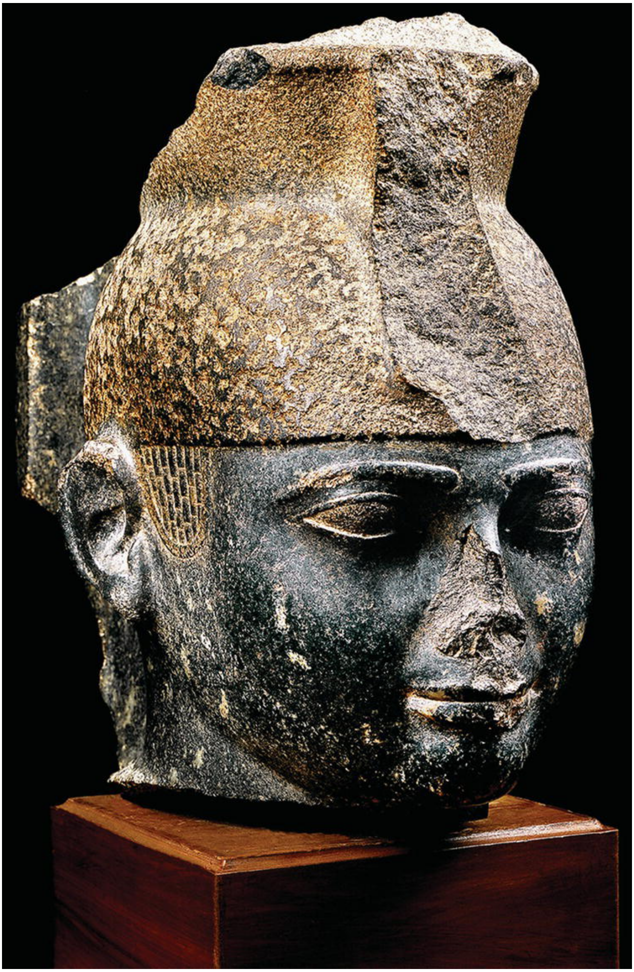


Figure 9.1 Taharqo head with a cap crown.

Source: Jürgen Liepe.

Although the Kushite monuments in Nubia are well preserved, the archaeological evidence in Egypt of this dynasty and earlier ones of the Third Intermediate Period is biased against many areas of settlement in the Delta and the Memphis region. This is also true for the Late Period, and the evidence discussed here does not represent the extent of urbanism that had developed in Egypt by the first millennium BC.

9.2 The Late Period: Overview

Nekau, an Egyptian ruler in Sais who had not supported the Kushite king Taharqo during the Assyrian invasions, was killed by Taharqo's successor Tanutamani. But Nekau was succeeded by his son Psamtek, who became a vassal of the Assyrians. After breaking his alliance with the Assyrians, who were threatened nearer to their homeland by a coalition of Babylonians and Medes, Psamtek eventually reunited Egypt under his kingship – bringing an end to the Third Intermediate Period.

Thus the Late Period begins with an Egyptian dynasty whose origins were in the northwest Delta at Sais. The Saite Dynasty, as it is sometimes called, was a period of indigenous rule during which Egypt was no longer dominated by foreign powers. Saite kings ruled until 525 BC, when Egypt was conquered by another superpower from southwest Asia, the Achaemenid Persians. During the 27th Dynasty Egypt was a satrapy of the Persian Empire for over 100 years, with the Persian king assuming the role of pharaoh but ruling from Iran. The frequent Egyptian rebellions finally succeeded in throwing off Persian control in 404 BC, and three dynasties of ruling families in the Delta (the 28th, 29th, and 30th Dynasties) successively competed for control. The Late Period ends with a brief second period of Persian domination, the 31st Dynasty, but the collapse of the entire Persian Empire was soon brought about by the conquests of Alexander of Macedon.

Psamtek I of the 26th Dynasty had a very long reign – 54 years. By ca. 656 BC he controlled the whole country and his daughter Nitiqret became the God's Wife of Amen. Foreign mercenaries, especially Ionian Greeks and Carians, provided strength in Psamtek's army. Not only were there external threats, but also internal ones – of a warrior class called *machimoi* of ultimately Libyan descent. At Tell Defenna in the Delta on the Pelusiac branch of the Nile, Flinders Petrie excavated a huge enclosure within which was a high mud-brick platform, built under Psamtek I. Petrie thought that the platform was the base for a huge fort, and Greek military equipment from the settlement area to the east provided evidence of these mercenaries being enlisted in the Egyptian army.

With the resurgence of Egyptian rule and a unified state came economic prosperity. Use of the demotic script also developed during this dynasty (see 2.3). Underpinning the economy was the richness of Egypt's agricultural base. Trade connections that Psamtek forged in the eastern Mediterranean increased his economic base, as did the extensive trade with Greek cities, which later in the Saite Dynasty was required by law to be conducted through the Greek city of Naukratis near Sais. Flinders Petrie investigated Naukratis in 1884–1885, but even at that early date a large section of the ancient city had been disturbed by farmers digging for organic deposits (*sebbakh*) for fertilizer.

Psamtek's son Nekau II, who initiated trade with the southern Red Sea region, began construction of a canal from the Delta's Pelusiac branch through the Wadi Tumilat to the Gulf of Suez. According to Herodotus, Egyptian ships at this time circumnavigated Africa – which probably reflects expanding trade in the Red Sea but not historical reality. The Phoenicians were also involved in the Red Sea trade, which included southern Arabia, at this time. But exotic raw materials from Nubia and the Punt region were also coming down the Nile. From the Dorginarti fort on an island in the Second Cataract, Lisa Heidorn has identified Egyptian, East Greek, and Levantine pottery which dates to the late Kushite, Saite, and Persian periods – indicating that there was movement of goods and people up the Nile through Lower Nubia as well.

The Saite kings built at Memphis/Saqqara, and at other sites in the Delta, Upper Egypt, and the oases of the Western Desert. Their major monuments, however, would have been at Sais, especially at a temple of the goddess Neith where these kings were buried in a temple courtyard. Little remains of this site to the north of the modern village of Sa el-Hagar, which may partially cover the ancient settlement. A huge enclosure with still standing buildings was described by visitors there in the early 19th century (including Jean-François Champollion). But British archaeologists at the site in the late 20th century describe a huge pit excavated for *sebbakh*, now filled with marshland, and seeping pools of water – and fragments of basalt, granite, limestone, and quartzite from ancient monuments. Despite such destruction, they were able to excavate surviving evidence of a Third Intermediate Period settlement of small-roomed houses in the northern part of the site.

A kind of archaism is seen in the art of both the Kushite and Saite dynasties, with tomb reliefs, sculptures, and mortuary texts reviving earlier models, especially from the Old and Middle

Kingdoms. But artists did not simply copy earlier styles – they created innovative statues and reliefs. Large high-status tombs were built, especially at Saqqara, where animal cults had become popular. From Saite times onward Apis bulls were buried at Saqqara in huge granite or basalt sarcophagi, in the underground Greater Vaults of the Serapeum.

Although the Saite military expanded briefly into southwest Asia – to the east of the Euphrates River – Nekau II's army was defeated at Carchemish in northwest Syria. But Nekau was able to keep the new superpower, the Neo-Babylonian Empire, from invading Egypt. Nekau II's successor Psamtek II sent an expedition to Upper Nubia, subduing any Kushite threat for the remaining years of the Saite Dynasty, and in Egypt Psamtek II had Kushite monuments defaced. But the Babylonians remained a threat to the succeeding king, Apries, who also sent an Egyptian army to northeastern Libya to settle a dispute with the powerful Greek colony of Cyrene.

Apries's name appears on column fragments from a large palace at Memphis, investigated by Flinders Petrie and later by Barry Kemp. Built on top of an enormous mud-brick platform (over 13 meters high by Kemp's estimate), the palace had two huge columned halls. Unlike earlier palaces, its floors and lower walls were covered with limestone, and there were elaborate stone-covered gateways. Although Apries's palace continued to be used in the Late Period, the king's political fortunes were definitely on the wane. His army was defeated in Cyrene. Together with resentment at Apries's favoring his Greek and Carian mercenaries, this setback caused a mutiny. Fleeing Egypt, Apries gained the backing of the Babylonian king Nebuchadrezzar II, who intended to set Apries up as a puppet-king. But the Egyptian army, led by Ahmose II/Amasis, who had usurped the throne, defeated the Babylonian forces and Apries was killed. The short reign of Ahmose II's son Psamtek III ended with the Persian invasion of Egypt in 525 BC led by Cambyses, who had Psamtek executed.

Most of the Persian kings of the 27th Dynasty ruled from a distance, and Saite/Egyptian organization of the government was mostly maintained. The Egyptian legal system was codified. At the top, the country was controlled by a Persian satrap, and Aramaic, the *lingua franca* of southwest Asia, was used in the Persian satrap's office as a language of administration.

Persian control of Egypt was aided by their strong military presence – including the use of Jewish mercenaries already in residence at Elephantine. Evidence of a Persian fort is found in the northwestern Sinai at Tell el-Herr, and during the Persian Period the fortified Saite settlement at Tell el-Maskhuta, in the middle of the Wadi Tumilat (eastern Delta), expanded in occupation. Such efforts by the Persians, however, did not prevent frequent Egyptian revolts.

The Persians supported Egyptian religion by building temples, which may in part have been an attempt to legitimize the Persian king as pharaoh. Most of the Persian monuments date to the earlier part of the dynasty, after which conditions seem to have been very unsettled. One of the better-preserved temples of this period is at Hibis in Kharga Oasis. Begun under the Saites, the Hibis temple was enlarged and decorated by the Persian king Darius I.

At Ayn Manawir in the southern Kharga Oasis French archaeologists have discovered a sophisticated water supply system, used from the 27th Dynasty through Roman times. Twenty-two *qanats*, long and deep subterranean galleries, were excavated in the sandstone bedrock. Water trapped in the bedrock during more moist climatic periods (early Holocene) would have drained into the *qanats*, supplying irrigation water for nearby land impossible to farm otherwise. Several small villages and a temple have also been excavated at Ayn Manawir, and 450 demotic ostraca were found in a temple annex room. The ostraca date from the late 26th to early 30th Dynasties and are mainly economic records, such as accounts, receipts, and contracts. The contracts point to the introduction of a monetary system, with the use of the Athenian silver tetradrachma coin as the standard, beginning in the reign of Darius II. Egypt was not widely monetized, however, until Ptolemaic times.

During the reign of Darius I the Delta canal, which was begun by Nekau II, was completed through the Wadi Tumilat to Lake Timsah and south to the Bitter Lakes and the Gulf of Suez (a different route from the modern Suez Canal, which in the north begins at Port Said on the Mediterranean), and Egyptian naval forces were used by the Persians in their attempts to conquer

Greece. Later in the Persian Dynasty, after ca. 450 BC, the Greek historian Herodotus visited Egypt and wrote his histories, which were generally biased against the Persians. With the death of the Persian king Darius II in 404 BC the Egyptians forced the Persians out of Egypt for over 60 years.

Although there was much political instability for the last Egyptian rulers of the 28th (one ruler for only five years), 29th, and 30th Dynasties, including the looming threat of the Persians and a civil war in 360 BC, monuments were constructed throughout Egypt, including the imposing easternmost gateway at the Temple of Karnak. At Elkab an enormous mud-brick enclosure (ca. 530 × 600 meters) was built in the 30th Dynasty, possibly as a fortification in the event of another Persian invasion. Although a small temple there was built by either Nectanebo I or II, most of the surviving monuments and town date to the Greco-Roman Period.

When the Persians reconquered Egypt in 341 BC, many temples were plundered. But Persian efforts to re-establish internal control were met with rebellion. For the Egyptians, Alexander the Great's invasion in 332 BC was a welcome end to the hated Persians' regime.

9.3 Tanis: A New City with Royal Tombs

Located in the northeastern Delta, Tanis (known today as San el-Hagar) was the royal city and port of the 21st and 22nd Dynasties. The city was built on two *gezira*s (mounded natural formations of sand); the northern one, which is called Tell San el-Hagar, has remains covering an area of ca. 177 hectares. Although many of the monumental stone blocks found at Tanis are inscribed with the cartouches of Rameses II and his son Merenptah, it is now evident that they were moved there from the 19th-Dynasty capital of Piramesse (modern Qantir), and other sites, perhaps by way of Piramesse. According to Manfred Bietak, Piramesse was probably abandoned because it was located next to the Pelusiac branch of the Nile, by then silted up.

Tanis was investigated in 1860 by Auguste Mariette, and two decades later Flinders Petrie excavated there. In the 20th century the site was excavated by French archaeologists and work continues there under the direction of Philippe Brissaud. Because the site covers an enormous area, Brissaud has studied the many mounded features with photographs taken by a camera suspended from a kite, which has been helpful in differentiating Greco-Roman Period structures built over ones of the Third Intermediate Period. Outside of the great temple precinct much of the ancient city remains to be investigated (Figure 9.2).

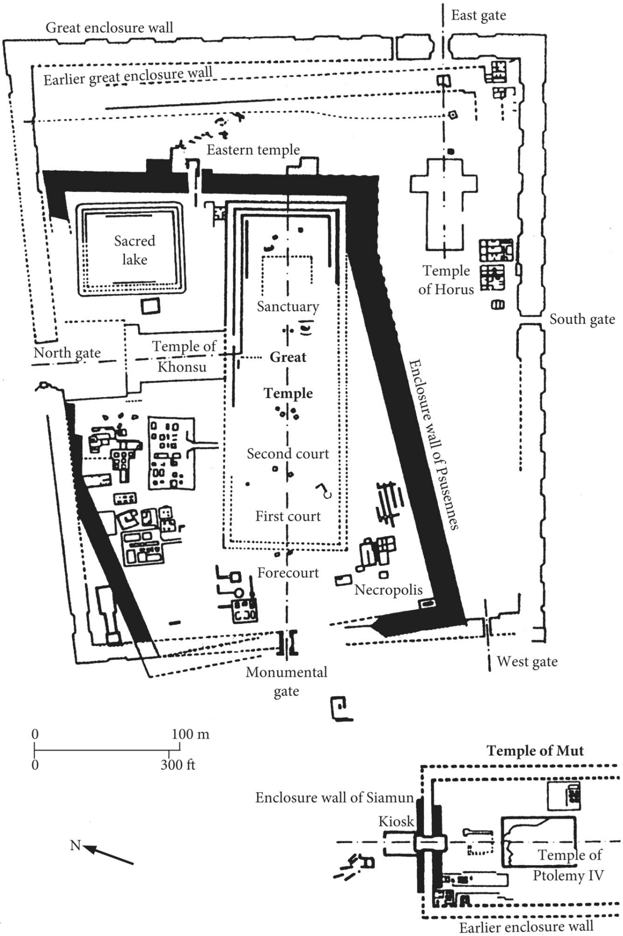

East gate
Great enclosure wall
Earlier great enclosure wall
Eastern temple
Sacred lake
Temple of Horus
Sanctuary
South gate
North gate
Temple of Khonsu
Great Temple
Enclosure wall of Psusennes
Second court
First court
Forecourt
Necropolis
West gate
Monumental gate
0
100 m
0
300 ft
Temple of Mut
Enclosure wall of Siamun
Kiosk
N
Temple of Ptolemy IV
Earlier enclosure wall

Figure 9.2 Plan of the temples and royal tombs at Tanis.

Source: Ian Shaw (ed.), The Oxford History of Ancient Egypt. Oxford: Oxford University Press, 2000, p. 332.

The most imposing monument at Tanis was the Temple of Amen, founded in the 21st Dynasty by Psusennes I, who also built the temple’s polygonal enclosure wall. Blocks for the Amen temple were transferred not only from Piramesse, but also from other monuments of the Old, Middle, and New Kingdoms. The entire complex, including a later Temple of Horus to the east (begun in the 30th Dynasty and finished by a Ptolemaic king) was surrounded by a second, massive mud-brick enclosure wall (430 × 370 meters, and 15 meters thick). On the western side of this wall Sheshonq III built a large monumental gateway, which was connected to the temple’s pylon by a processional way lined with obelisks of Rameses II.

In 1939 French archaeologist Pierre Montet discovered a subterranean mortuary monument at Tanis, within Psusennes I’s enclosure wall and to the southwest of the Amen temple’s first pylon. Hidden beneath the remains of houses of the later first millennium BC, the tombs contained a great number of rich grave goods, including the solid silver coffin of Psusennes I. Constructed of much reused limestone and granite, the funerary complex consists of nine tombs, including the burials of two 21st-Dynasty kings, Psusennes I and Amenemnisu (originally built for Psusennes’s queen Mutnedjemet), Psusennes I’s son Ankhefenmut, and a high official of this king named Wendjebawendjedet (Figure 9.3). Burials of the 22nd Dynasty include those of Sheshonq II, Osorkon II, Osorkon’s young son Hornakht, and Takelot II. Several tomb chambers in the complex could not be identified with named owners, and Tomb 5, originally for Sheshonq III, possibly contained the burial of Sheshonq I, whose canopic jar and heart scarab were found in it.

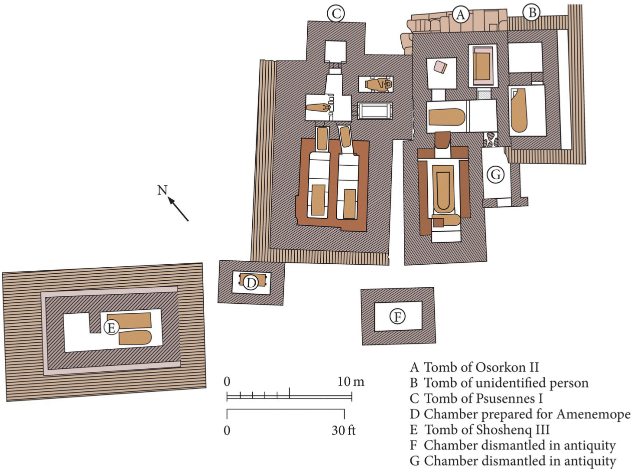

C
A
B
N
G
D
E
F
0
10 m
0
30 ft
A Tomb of Osorkon II
B Tomb of unidentified person
C Tomb of Psusennes I
D Chamber prepared for Amenemope
E Tomb of Shoshenq III
F Chamber dismantled in antiquity
G Chamber dismantled in antiquity

Figure 9.3 Plan of the royal necropolis at Tanis.

Source: Ian Shaw, Exploring Ancient Egypt. Oxford: Oxford University Press, 2003, p. 228.

Although some of the burials in the Tanis funerary complex had been robbed in antiquity, the tomb of Psusennes I (Tomb 3) was undisturbed. This tomb was designed with an antechamber and two other rooms in limestone, and two granite burial chambers, the northern one of which contained Psusennes's burial. The king's burial consisted of a granite sarcophagus usurped from the Valley of the Kings, which had originally belonged to Merenptah, and an inner granodiorite coffin, within which was the silver coffin.

Psusennes's mummy was covered with a gold funerary mask inlaid with glass and lapis lazuli – reminiscent of Tutankhamen's gold mask. Jewelry found on the mummy and within the tomb included a gold necklace with the king's cartouches, which weighs over 8.5 kilograms (Plate 9.1), and many inlaid gold pieces: two pectoral necklaces, four scarab pendants, and many rings.

To what extent Tanis functioned as a ruling capital of these dynasties is uncertain; this will hopefully be clarified with further excavations there. The city was a major cult center for the state god Amen and the Theban triad, and it was also a royal place of burial where pharaonic traditions continued in modified and still grand forms.

9.4 Napata/Gebel Barkal and Sanam

Although the Kushite kings of the 25th Dynasty ruled over both Egypt and Nubia, their political center was at Napata, downstream from the Fourth Cataract. The most prominent physical feature of the ancient city of Napata is the sandstone outcrop known as Gebel Barkal, its steep cliffs rising over 100 meters above the plain. When Egypt controlled Upper Nubia in the New Kingdom the mountain was believed to be sacred – the chief Nubian residence of their god Amen. This was where Thutmose III erected a temple that was later enlarged in the 19th Dynasty. Although the origins of the later Kushite state are unknown, by the 9th/8th centuries bc, Napata was the center of this indigenous polity, whose state religion focused on the Amen cult there. Of great symbolic importance to the Kushite kingship, the Napatan cults of Amen of Karnak and Amen of Napata were believed to confer legitimacy upon the king. Extending to the east from the base of Gebel Barkal a number of temples and a palace complex were built by the 25th-Dynasty kings and their successors (Figure 9.4).

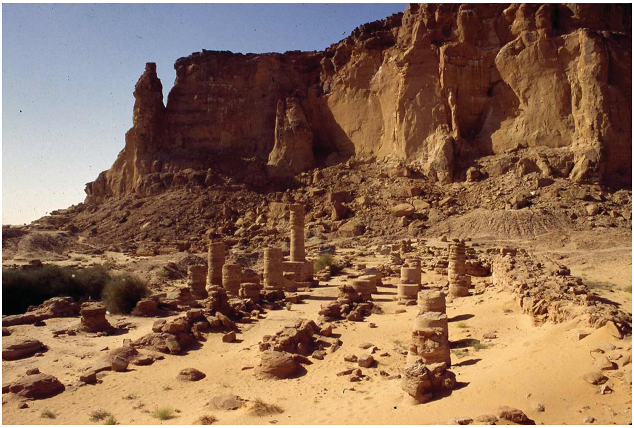


Figure 9.4 View of temples at the base of Gebel Barkal.

Source: © Timothy Kendall.

The first major excavations at Napata were by George Reisner (1916–1920) and understanding of the sequence of temple construction is based on his work. In the early 8th century BC a mud-brick temple with stone columns (B 800-sub in Reisner's numbering system) was built there, probably by a Kushite king named Alara. His successor Kashta, who began the conquest of Egypt, extended this temple in stone and built an adjacent palace. Kashta's son Piy restored the 18th/19th-Dynasty temple (B 500) at Napata, which was over 150 meters long, and rebuilt temple B 800 in stone. Piy also restored the large hypostyle hall that had been added onto the 18th-Dynasty temple by Sety I and Rameses II. King Taharqo, who also left a number of temple monuments in Egypt, built two temples at Napata (B 200 and B 300). The last king of the 25th Dynasty, Tanutamani, built a kiosk structure inside temple B 500.

The Napatan temples were designed in the style of Egyptian ones, with a series of pylons, an outer court, hypostyle hall, *pronaos*, and inner sanctuary (*naos*) and chapels. The continued importance of the state cult of Amen, which was introduced into Upper Nubia in the New Kingdom, probably helped to reinforce the role of Kushite kings there. The Kushites spoke an indigenous language (Meroitic), for which they did not yet have a writing system, and inscriptions on the Napatan temples (and in tombs) are in Egyptian hieroglyphs.

After the 25th Dynasty Kushite kings continued to build at Napata, and restoration took place after the site was pillaged and burned – most likely by an invasion of the army of the Saite king Psamtek II. At the site of Dokki Gel, to the north of Kerma, archaeologists of the University of Geneva mission have found fragments of seven monumental statues of Kushite kings that were ritually buried after Psamtek's invasion.

Later, when Meroe became the seat of the Kushite rulers, temple restoration and construction continued at Napata, and new palaces were also erected there – due, no doubt, to Napata's cultic importance. While the earlier temples were built in an arc at the base of Gebel Barkal, the latest ones and a large palace complex were erected in an area to the northeast of the gebel.

Much archaeological work remains to be done at Napata. Timothy Kendall resumed Reisner's work there late in the 20th century, and Italian and Spanish archaeologists have also been excavating there. An exciting find occurred in 1987, when, with the help of an American rock climber, Kendall scaled a pinnacle separated from the main gebel, where he copied an inscription of Taharqo, first seen with binoculars. The inscription was originally covered with gold sheeting.

Archaeological investigations at Napata have focused on the monuments there – the temples and palaces, and tombs to the west of the gebel. Thus the evidence suggests that Napata was a cult center with royal residences (that may also have had administrative functions). But the plan of the city remains unknown – as are any domestic quarters for its non-elite and industrial areas where its artisans and craftsmen would have worked.

Across the river from Napata is the site of Sanam, at the end of the track/road that crossed the Bayuda Desert from Meroe farther upstream – a much shorter route than the trip by boat downstream. Sanam was excavated by an Oxford University expedition in 1912–1913, led by Francis Llewellyn Griffith. A large Amen temple was located at this site, where there was also evidence of craft workshops for *shawabti*s and other small artifacts. In the desert to the east of the temple Griffith excavated what he called the “treasury,” a columned building over 250 meters long with 17 storerooms to either side of a central corridor. Artifacts with cartouches of Kushite kings (Piy to Aspelta) date the structure from the 25th Dynasty to the mid-6th century BC. In both the Sanam temple and “treasury” there is evidence of large-scale burning. Piles of ivory tusks were found in one room of the “treasury,” and this structure may have been a kind of warehouse for the exotic raw materials imported through Nubia from regions to the east of the Nile – a major source of state wealth.

Over 1,500 burials of different types/statuses were also excavated at Sanam. Possibly the Egyptian-style burials there, in subterranean chambers entered by staircases, with mummified remains in coffins and Egyptian grave goods and wheel-made pottery, belonged to Egyptians (and Egyptianized Nubians?) employed as bureaucrats and artisans by the Kushite kings. Another type of burial at Sanam, of extended bodies in rectangular pits accompanied by wheel-made pots, may represent a lower-status Egyptianized group. The simplest burials, of contracted bodies with both wheel-made and hand-made pottery, and multiple burials with no grave goods, may be graves of the non-elite majority of the Napatan population who worked there and were buried at a different location from the Napatan royal cemeteries. While Napata may have been the center of the state religion and the royal seat where the accession took place, Sanam may have functioned as an important economic (and industrial?) center.

9.5 el-Kurru and Nuri: The Kushite Royal Tombs

Although two post-25th-Dynasty Napatan royal tombs (and some Meroitic royal tombs) are found in the cemetery to the west of Gebel Barkal, the earliest royal tombs were built in a cemetery at el-Kurru, 15 kilometers downstream from Napata (Figure 9.5). George Reisner found evidence of a walled town at el-Kurru (which he never published), and Timothy Kendall has suggested that this was the earliest seat of the Kushite Dynasty.

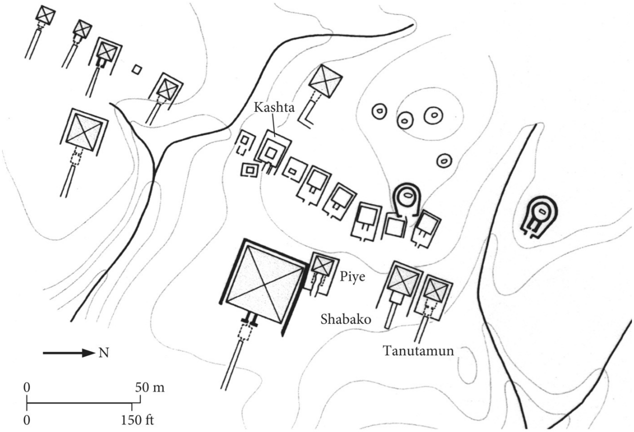
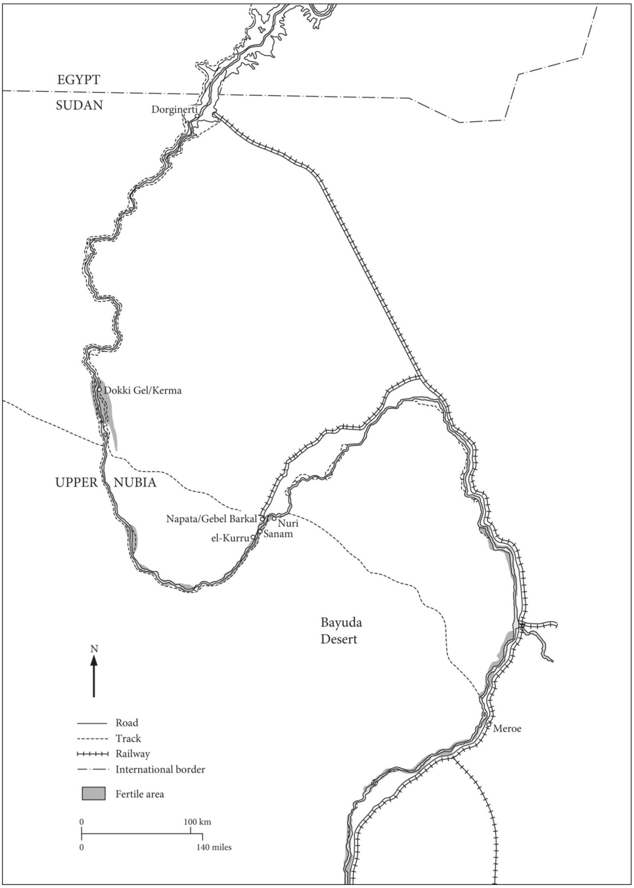


Figure 9.5 Plan of the royal cemetery at el-Kurru.

Source: Drawn by Tracy Wellman. From Mark Lehner, The Complete Pyramids. London and New York: Thames & Hudson, 1997, p. 195.

At el-Kurru Reisner excavated 16 tombs which he thought were ancestral to King Piy, including tomb Ku. 8, which he identified as belonging to Piy's predecessor Kashta. The earliest tombs (Ku. Tum. 1, 2, 4, 5) were round tumuli of stone with subterranean burial pits – reminiscent of some C-Group burials of the Second Intermediate Period. Two later tumuli, Ku. Tum. 6 and Ku. 19, had horseshoe-shaped enclosure walls built with masonry blocks. Made of mud-brick, the earliest funerary chapel appears on the east side of Ku. Tum. 6.

The ten other ancestral tombs at el-Kurru (Ku. 7, 8, 9, 10, 11, 13, 14, 20, 21, 23) had square superstructures, only two of which did not have chapels (Ku. 20 and 21). These two tombs were smaller than the others and perhaps belonged to queens or other family members of the king buried in Ku. 8, the largest of these tombs. Although Reisner thought that these ten tombs were square flat mastabas, Kendall's investigations indicate that they were probably small pyramids.


EGYPT
SUDAN
Dorginerti
Dokki Gel/Kerma
UPPER NUBIA
Napata/Gebel Barkal
Nuri
Sanam
el-Kurru
Bayuda Desert
Meroe
N
Road
Track
Railway
International border
Fertile area
0
100 km
0
140 miles

Map 9.2 Sites in Upper Nubia from the Third Intermediate Period onward.

Piy's pyramid tomb at el-Kurru (Ku. 17) represents a further elaboration of tomb design. In a 5.5-meter-deep pit, the tomb chamber was partially rock-cut with a corbel vaulted roof. It was entered by a rock-cut stairway, which was covered by a funerary chapel after the burial had taken place. The pyramid was made of solid masonry with four smooth faces.

Three other kings of the 25th Dynasty, Shabaqo, Shabitqo, and Tanutamani, were also buried at el-Kurru in similarly constructed monuments. But with steep sides and bases only 8–11 meters in length, the el-Kurru pyramids were very different in shape and size from the much earlier Egyptian royal tombs of the Old and Middle Kingdoms. The el-Kurru pyramids are more similar to the small pyramids over private New Kingdom tombs at Thebes.

At el-Kurru the chief queens of Piy and later kings were buried in smaller pyramid tombs on a ridge to the southwest, and minor queens were buried in separate cemeteries. Reisner also excavated a cemetery with 24 horse burials, of the four 25th-Dynasty kings who were buried at el-Kurru. The horses were found standing in four groups of pits and facing the southeast.

There is a clear evolution of tomb types at el-Kurru from indigenous-type Nubian stone tumuli, to tumuli surrounded by horseshoe-shaped enclosure walls (one with a funerary chapel), to pyramid superstructures. The Egyptianization of these tombs is also seen in the burials: the earliest ones were contracted and placed on beds (in Nubian tradition), while later ones were extended (as Egyptians were buried) and oriented east–west. With the conquest of Egypt, the Kushite royal burials emulated Egyptian ones in the treatment of the body: the body was mummified and placed in nested coffins, and the viscera were embalmed separately in canopic jars. Large numbers of Egyptian-type *shawabti*s were also included as tomb goods. It is likely that Egyptian and Egyptian-trained craftsmen decorated the royal tombs and made many of the artifacts that Reisner found there.

Taharqo was the first king to build his pyramid tomb in a new cemetery, Nuri, 10 kilometers upstream from Napata and on the opposite bank of the Nile (see Figure 9.6). This cemetery was used for the pyramid tombs of 21 later Napatan kings (post-25th

Dynasty) to the time of Nastasen (ca. 335–315 BC), and 53 queens, who were buried beneath considerably smaller pyramids.

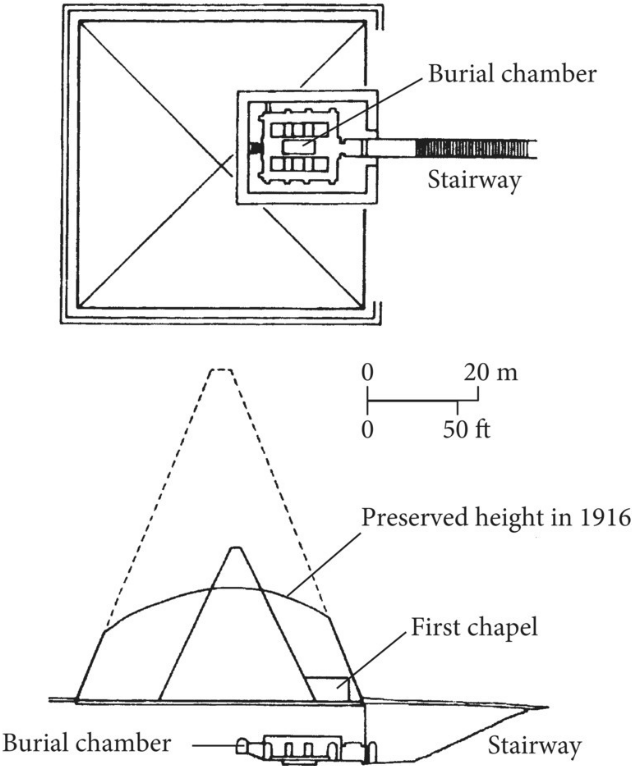

Burial chamber
Stairway
0
20 m
0
50 ft
Preserved height in 1916
First chapel
Burial chamber
Stairway

Figure 9.6 Plan and cross-section of the pyramid of Taharqo at Nuri.

Source: Drawn by Tracy Wellman. From Mark Lehner, The Complete Pyramids. London and New York: Thames & Hudson, 1997, p. 196.

With a base length of 51.75 meters, Taharqo's pyramid is much larger than any at el-Kurru – as well as the later pyramids at Nuri. But an earlier pyramid with a base length of 28.5 meters and four smooth faces had first been built for Taharqo's tomb. Taharqo's later pyramid, which perhaps covered a funerary chapel to the east, was stepped in design, as were most later Kushite pyramids. Taharqo's subterranean rock-cut tomb was also huge – 21 × 16.5 meters. A narrow rectangular passage was cut around the inner rectangular tomb, which had two rows of huge rock-cut piers (more than 1 meter thick) and a low platform for the burial in the center. The tomb's ceiling consisted of rock-cut barrel vaults.

The other kings' tombs at Nuri had funerary chapels with a pylon façade built on the southeast side of the pyramid. Up to three tomb chambers were cut 8–9 meters below ground and many were decorated with Egyptian mortuary scenes and texts. As in the later el-Kurru royal tombs, the kings' bodies were mummified and placed in nested coffins, with the viscera in canopic jars. Evidence suggests that gold was used extensively on parts of the royal mummies, including gold masks and foil covering the fingers and toes – in a similar fashion to what Howard Carter found on Tutankhamen's mummy. Hundreds of *shawabti*s were also found in these burials. Although these kings no longer controlled Egypt, they continued to be buried according to Egyptian customs for the royal dead.

In the early 4th century BC royal burials were discontinued at Nuri, as Meroe, located much farther upstream, became the place of Kushite royal burials.

9.6 Saqqara: The Serapeum and Animal Cults

The bull was an animal symbolically associated with the Egyptian king from early times, and different cults for bull gods are known in ancient Egypt. Although the cult of the Apis bull at Memphis may have existed as early as the Early Dynastic Period, the earliest individual bull burials discovered at Saqqara date to the later 18th Dynasty (reign of Amenhotep III). Subterranean galleries for burial of the Apis bulls, known as the Lesser Vaults, were begun at Saqqara late in the reign of Rameses II and were in use until the Greater Vaults were begun in the early 26th Dynasty under Psamtek I. During the Saite Dynasty the Apis bull cult and other animal cults had enormous resources invested in them, which continued through Ptolemaic times.

The Serapeum, where the Apis bulls were buried, is located to the northwest of Djoser's Step Pyramid. In 1851 Auguste Mariette began excavating at Saqqara intent on finding the Serapeum Way, the east–west processional route across Saqqara leading to the

Apis burial galleries – at the time known only from classical sources. Mariette excavated the galleries and uncovered a huge number of artifacts associated with the processional route (see Figures 9.7 and 9.8). Two ships were sent from France to transport the artifacts to Europe; most are now in the Louvre Museum.

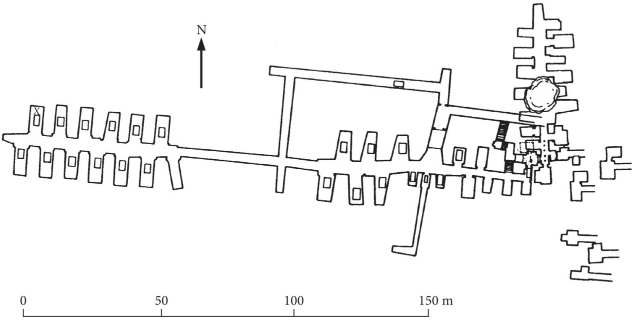


Figure 9.7 Plan of the Serapeum at Saqqara.

Source: Drawing by Michael Jones. K. A. Bard (ed.), *The Encyclopedia of the Archaeology of Ancient Egypt*. London: Routledge, 1999, p. 715.

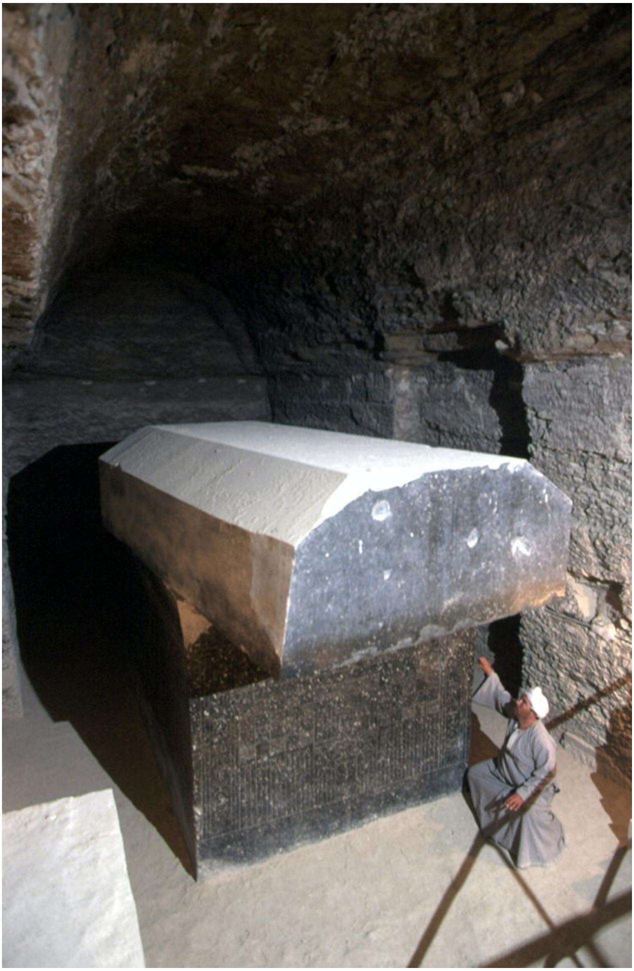


Figure 9.8 Granite sarcophagus of a sacred Apis bull, buried in the underground gallery of the Serapeum at Saqqara. Picture taken in 1997.

Source: Photo12/Jean Guichard.

The Serapeum Way was begun in the 26th Dynasty, and in the 30th Dynasty 134 sphinxes were placed along the route. During the Ptolemaic Dynasty Hellenistic statues of 11 Greek philosophers and writers were placed near the end of this route. Among Mariette's finds were hundreds of royal stelae, which provide information about the Apis bull cult. Dates are often given for the bull's birth, its installation in the Temple of Ptah in

Memphis, and its death and burial, when the bull-god was mourned throughout Egypt.

About 450 meters to the northeast of the Serapeum Walter Emery found underground galleries with the burials of mummified ibises while excavating much earlier tombs in North Saqqara in 1964. To the north of this are galleries for burials of the Isis cows (mothers of the Apis bulls), and there are also subterranean galleries with mummified baboons, falcons (Figure 9.9), and more ibises (Figure 9.10). Subsequent investigations of the birds in the North Ibis catacomb have shown that huge numbers of mummified ibises in pots were stacked there, while the falcon/hawk remains buried in pots that took up much more space in the falcon/hawk catacomb often contained tree twigs and bird feathers wrapped in linen, and not real bird mummies.

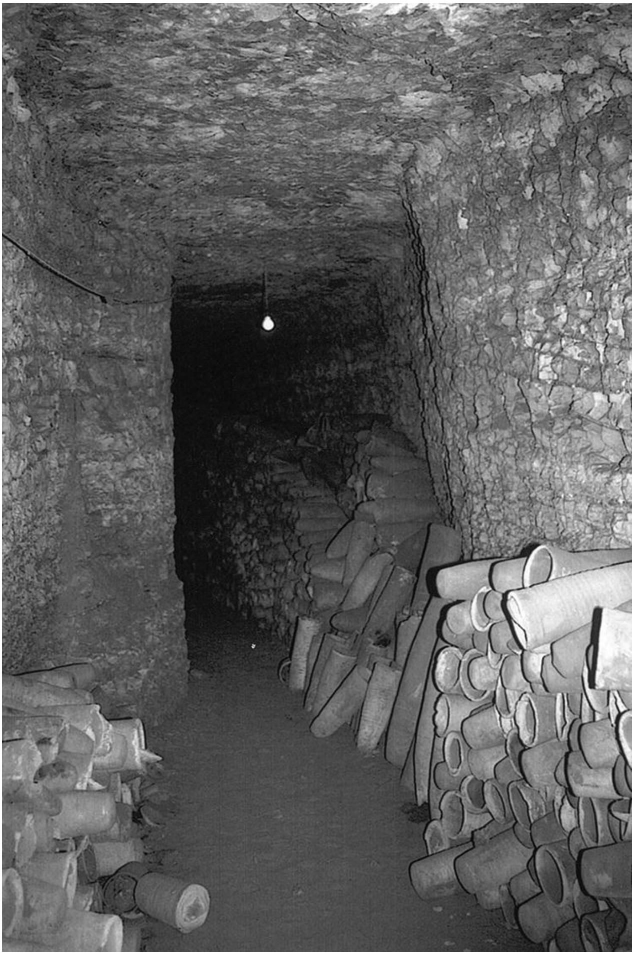


Figure 9.9 View of the gallery with mummified falcons, Saqqara.

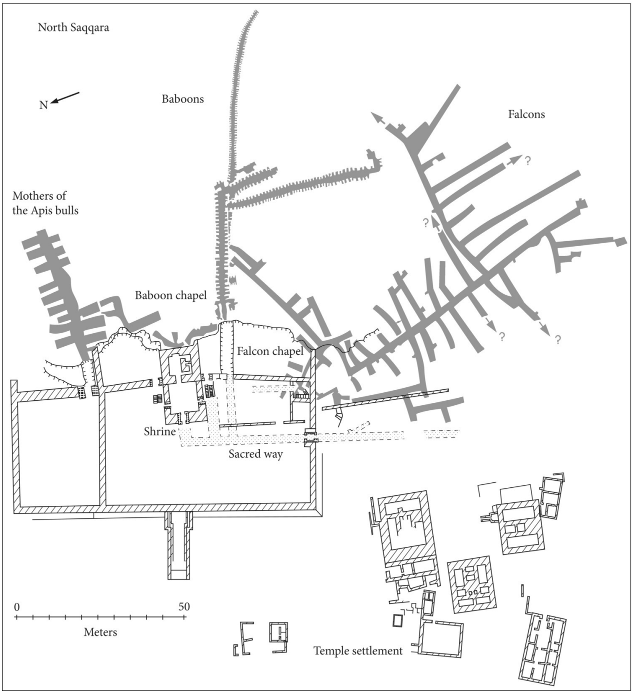

North Saqqara
N
Baboons
Falcons
?
Mothers of
the Apis bulls
?
Baboon chapel
?
?
Falcon chapel
Shrine
Sacred way
0
50
Meters
Temple settlement

Figure 9.10 Plan of the Sacred Animal Necropolis at North Saqqara.

> Source: B. J. Kemp, Ancient Egypt. Anatomy of a Civilization. Abingdon: Routledge. 2006. Figure 132, p. 378. Adapted from H. S. Smith, A Visit to Ancient Egypt: Lift at Memphis and Saqqara c. 500–30 BC, Warminster, 1974, p. 40, Figure 9; p. 33, Figure 7; p. 44, Figure 10; G. T. Martin, The Sacred Animal Necropolis of North Saqqara: The Southern Dependencies of the Main Temple Complex. London: The Egypt Exploration Society, 1981, P1 IA; E. A. Hastings, The Sculpture from the Sacred Animal Necropolis at North Saqqara, 1964–76. London: The Egypt Exploration Society, 1997. Plan 2.

Also in the area of North Saqqara with the animal burials are the remains of a temple complex built in the 30th Dynasty by Nectanebo I and Nectanebo II over an earlier Saite structure. The so-called "Cemetery of Cats" on the eastern edge of the Saqqara escarpment, where Alain-Pierre Zivie has been excavating New Kingdom tombs (see 8.10), was associated with a temple of the cat-goddess Bastet (the Bubastieion), to the north of which were burials of mummified canids associated with a temple of Anubis (the Anubieion). Recently Paul Nicholson (Cardiff University) has been investigating the catacombs of the Anubieion and preliminary examination of some of the mummified animals there by Selima Ikram (American University, Cairo) has identified them as dogs.

Great numbers of pilgrims came to these temples, which supported large communities of priests and other temple personnel. Pilgrims' petitions to temple oracles were written by scribes, and there were specialists such as astrologers and interpreters of dreams. Much of this evidence is Ptolemaic, and these cults continued to be important in Greco-Roman times. The pilgrims left the mummified animals (both real and faked) as offerings to these cults, which may have been associated with the Osirian cycle of life, death, and rebirth, and associated concepts of fertility and procreation. But cemeteries of mummified animals are known throughout Egypt from late dynastic times onward, evidence that such beliefs had wide followings, not only at Saqqara. Outside the Ramessid Temple of Ptah at Memphis is a site known as the embalming house of Apis, considerably to the southeast of the Anubieion at Saqqara, from where the processional route led westward to the Serapeum. In the 1980s British archaeologist Michael Jones investigated the embalming house, which was first uncovered in 1941 by Egyptian archaeologists Mustafa el-Amir and Ahmed Badawy. The American architect John Dimick, who worked with German Egyptologist Rudolph Anthes in the 1950s, identified the limestone and travertine slabs at the site as the platforms on which the Apis bull was embalmed. Jones suggests that mummification of these huge animals may have taken place there, after which they were probably placed on the stone "beds," decorated in relief with lions, for purification ceremonies and other rites.

9.7 Some High-Status Tombs of the Third Intermediate Period and Late Period

Although there were periods of great socio-political disruption in Egypt between the Third Intermediate Period and the 27th Dynasty, some high-status individuals built very impressive tombs, especially in the Memphis region in the north and western Thebes in the south. At Buto in the northern Delta there is also recent evidence from this period of two elite burials in stone sarcophagi, which have been excavated by the German

Archaeological Institute, Cairo, under the direction of Ulrich Hartung. The larger burial, Grave J2/89, contained an usurped granite sarcophagus, the red granite lid of which has an inscription identifying it as that of an official named Paraemheb, probably from the reign of Rameses II. In between the granite sarcophagus of this burial and the decayed inner wooden coffin was the skeleton of a cat, possibly the pet of the adult male interred there. Jewelry in this burial included a heart scarab made of various materials, including lapis lazuli, and two bracelets of gilded silver inlaid with lapis lazuli and blue glass containing the two cartouches/names of King Iuput II of Leontopolis (23rd Dynasty).

At Thebes during the Libyan dynasties a new type of private tomb was built, which consisted of a small mud-brick temple structure on the Theban plain (and not excavated into the limestone hills, as were those of the New Kingdom), with rock-cut shafts leading to the subterranean burial. These tombs were the prototypes of much more grandiose ones built in Thebes at el-Asasif in the 25th and 26th Dynasties.

As High Steward of two God’s Wives of Amen, Harwa was one of the highest-ranking officials at Karnak in the 25th Dynasty. Located in front of the 11th-Dynasty mortuary complex of Mentuhotep II (see 7.3), Harwa’s large unfinished tomb (TT 37) was the first of a group to be built at el-Asasif over the next 150 years. Italian archaeologist Francesco Tiradritti has recently been restoring and excavating this tomb (Figure 9.11).

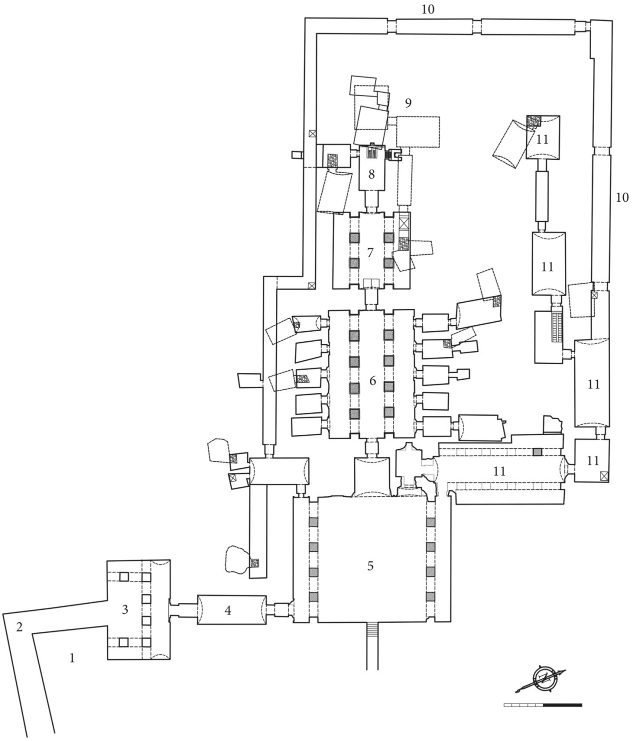


Figure 9.11 Plan of the tomb of Harwa at el-Asasif: (1) quarry, (2) access ramp, (3) entrance portico, (4) vestibule, (5) courtyard, (6) first pillared hall, (7) second pillared hall, (8) Osiris's shrine, (9) funerary apartment, (10) corridor, (11) tomb of Akhimenru.

Source: Associazione Culturale "Harwa 2001" ONLUS, Montepulciano, Italy. Drawing by Dieter Eigner. Computer-processed by Silvia Bertolini.

At the bottom of a descending passage, Harwa's tomb opened through an antechamber and vestibule, which led to an open sunken court. From the court the axis of the tomb turned 90° into a series of pillared halls and passageways, which led to a hall with a niche for an Osiris figure in high relief. The burial was at the bottom of a vertical shaft in the second pillared hall. According to Tiradritti, the tomb is modeled on the Osireion at Abydos (see 8.6), and the tomb's sunken reliefs document Harwa's passage from daily life on earth to his death and transition to the afterlife.

In the 26th Dynasty el-Asasif continued to be the area in which the highest status tombs were built. The largest el-Asasif tombs were built by Mentuemhat (TT 34, ca. 640 BC), Governor of Upper Egypt, and the Chief Lector Priest Petamenopet (TT 33, ca. 600 BC). Similar in design to (but larger than) Harwa's tomb, these had large mud-brick superstructures, which emulated New Kingdom royal mortuary temples. Still visible at el-Asasif, the superstructures of the large 26th-Dynasty tombs consisted of three walled courts, fronted by a pylon. The tomb's sunken court, where daily offerings of the funerary cult were placed on an offering table, was located in the second of the brick courts. The large Saite Period tombs at el-Asasif were robbed not long after their burials and the subterranean chambers were reused for later burials.

In the north high officials of the 26th Dynasty were buried in tombs at Saqqara, Giza, and Abusir, which have acquired the designation "Persian tombs." These tombs were ingeniously designed with special shafts, probably to lower the heavy nested sarcophagus to the bottom of the tomb. The sarcophagus was placed on top of sand which filled the main shaft, and it was lowered as sand was removed from subsidiary shaft(s). Once refilled with sand, these shafts also foiled tomb robbers. Although their superstructures have been destroyed, some of these tombs remained undisturbed by grave robbers.

In the 1990s a Czech team of archaeologists working at Abusir, led by Miroslav Verner, excavated the late 26th/27th-Dynasty tomb of Iufaa (Figure 9.12). Iufaa was a lector priest and palace official, and the vaulted limestone roof of his tomb was at the bottom of a vertical shaft filled with sand, over 21 meters below the surface. It took three years for Verner's workers to clear the main shaft and the two vertical subsidiary shafts, also filled with sand, which emptied into the main shaft. In order for robbers to penetrate the burial, several hundred cubic meters of sand from the main shaft, as well as sand from the subsidiary shafts, would first have had to be removed – essentially an impossibility.

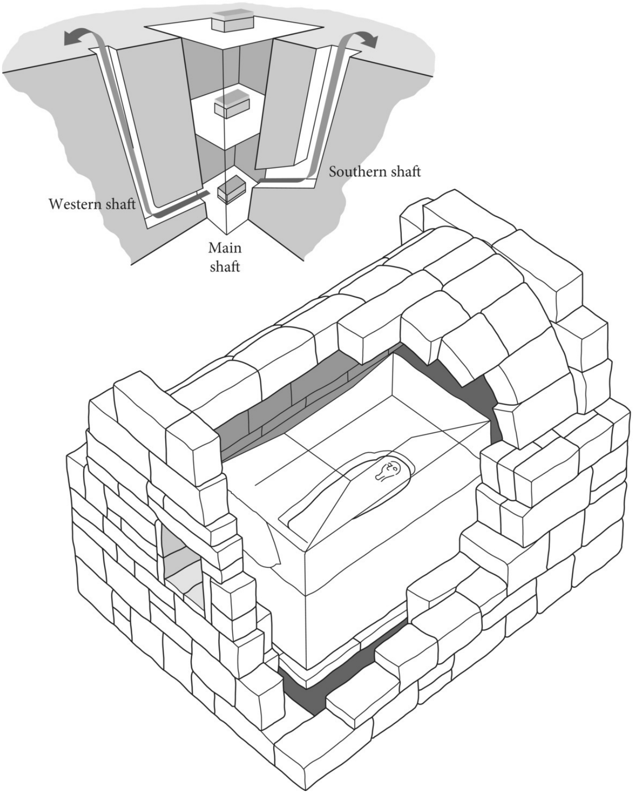


Figure 9.12 Plan of the 26th-Dynasty tomb of Iufaa at Saqqara.

> Source: Zahi Hawass, "Abusir Tomb," *National Geographic Magazine* 194 (5) (1998), p. 107. Reproduced by permission of Kenneth Garrett/National Geographic Creative.

Within Iufaa's decorated burial chamber (ca. 4.88 × 3.35 meters in area), which was constructed of limestone blocks, the Czech archaeologists found a limestone lid to the sarcophagus that weighed 24 tons. Beneath that was a huge basalt anthropoid sarcophagus, within which were the decayed remains of a wooden coffin which, when removed, revealed a covering of thousands of faience beads. When examined in a laboratory, the mummy was found not to be well preserved, but the fingers were still covered with gold foil.

9.8 Tell el-Maskhuta and Tell el-Herr

Although a well-fortified site of the late New Kingdom was located at Tell el-Retabah in the Wadi Tumilat (eastern Delta), in Saite times the major settlement (and fort) in the wadi was moved east to Tell el-Maskhuta, about 15 kilometers west of modern Ismailia. According to John Holladay, the University of Toronto archaeologist who directed excavations at the site (1978–1985), Tell el-Maskhuta had been a small unfortified Hyksos village in the later Second Intermediate Period. But when the Delta canal through the Wadi Tumilat was begun by the Saite king Nekau II, Tell el-Maskhuta became the wadi's most important frontier fortress. A large temple of the god Atum was built, to the north of which are the remains of mud-brick houses, granaries, and ovens – probably to be associated with the community of temple personnel and workers.

Possibly following Nekau's defeat in Syria at Carchemish, a huge defensive wall, 8–9 meters thick and 200 meters long on each side, was built at Tell el-Maskhuta. According to Holladay, two phases of destruction occurred when the site was attacked by the army of the Chaldean king Nebuchadrezzar II, in 601 BC and 568 BC. The fortress was also attacked by the Persian army in 525 BC, after which the settlement inside the walls expanded to cover the entire area of the enclosure. In the Wadi Tumilat the Persian king Darius erected four stelae (inscribed in four languages), about his completion of the Delta canal.

Much imported pottery has been excavated at Tell el-Maskhuta, especially Phoenician and East Greek pottery dating to Saite times and the 60 years of Egyptian rule between the two Persian dynasties. During a rebellion against the Persians in 487 BC a large well outside the fort's walls was blocked up with refuse, including much pottery. South Arabian silver coins and small limestone incense altars in South Arabian style point to trade with the southern Red Sea region during the 30th Dynasty.

Gaps in occupation occurred at Tell el-Maskhuta at two major junctures in time: when the Persians were ultimately defeated by Alexander the Great, and at the end of the Ptolemaic Dynasty when Egypt became a Roman province. Occupation at the site resumed after the Delta canal was rebuilt, first by Ptolemy II and later under the Roman emperor Trajan.

To the north of the Wadi Tumilat in the northwest Sinai is another fortress, Tell el-Herr, which has been excavated by French archaeologist Dominique Valbelle as part of salvage operations to investigate sites in the region before they were destroyed by new agricultural development. Somewhat smaller than Tell el-Maskhuta, the Tell el-Herr fortress (ca. 125 meters long on each side) was located to the south of the Pelusiac branch of the Nile on an important overland route across the northern Sinai. Four different stages of occupation have been identified at the site, from the first period of Persian domination to the late Roman Period.

The locations of these fortified settlements indicate the importance of the overland route into Egypt across the Sinai – through which invading armies would have traveled – and the new canal route, which was important for sea trade between the Mediterranean world and the Red Sea (and beyond). With the defeat of the Persians Egypt became increasingly connected to powers that were centered on the northern side of the Mediterranean – first with the Macedonian Greeks and the subsequent founding of the Ptolemaic Dynasty, and later with the Roman world.

Chapter 10
The Greco-Roman Period

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Greco-Roman Egypt

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Introduction

Following Alexander the Great’s conquest of Egypt, the country was ruled by the Ptolemies, a dynasty of Macedonians. In the northwestern Delta Alexander founded the city of Alexandria, which became a great royal center – with palaces, temples, and other monuments, including the famous lighthouse. New settlements were founded in the Faiyum, where irrigation projects greatly extended the land under cultivation. The Ptolemies continued to support Egyptian temples, and some of the best-preserved examples in Egypt today were built during this dynasty. Although the early Ptolemaic rulers extended Egypt’s holdings abroad, from the mid-2nd century BC onward conflict with the other powers in the eastern Mediterranean was increasingly resolved by the Romans.

In 31 BC the last Ptolemaic ruler, Cleopatra VII, and her Roman ally Marc Antony, were defeated by Octavian, later the emperor Augustus, resulting in Egypt becoming a Roman province in 30 BC. The Roman emperors ruled from Rome and Egypt was governed by a prefect, chosen by the emperor. In the beginning three Roman legions were stationed there to provide control, and Egypt (including the oases in the Western Desert) was greatly exploited by Rome for its agricultural wealth. Rome was also interested in the ports that the Ptolemies had established on the Red Sea, which were transit points for overseas trade to the southern Red Sea region and India.

Although the Roman emperors continued to build and decorate temples of Egyptian gods, support of the Egyptian priesthood was reduced. In the 2nd and 3rd centuries AD Christianity increasingly gained adherents in Egypt, and in the century after the emperor Constantine’s acceptance of Christianity in 312, most Egyptian temples were closed. The civilization of the pharaohs finally came to an end in the 5th century.

This chapter takes a very selective look at the evidence of Greco-Roman Egypt, as so much has been written about these two periods in Egypt, which are included in studies of the classical world. The evidence is also divided between Greek and Egyptian culture, especially for the written material. As with the Late Period sites, there is a lack of evidence for many major settlement areas, in the Delta and at Memphis.

Greco-Roman Egypt

10.1 The Ptolemaic Period: Overview

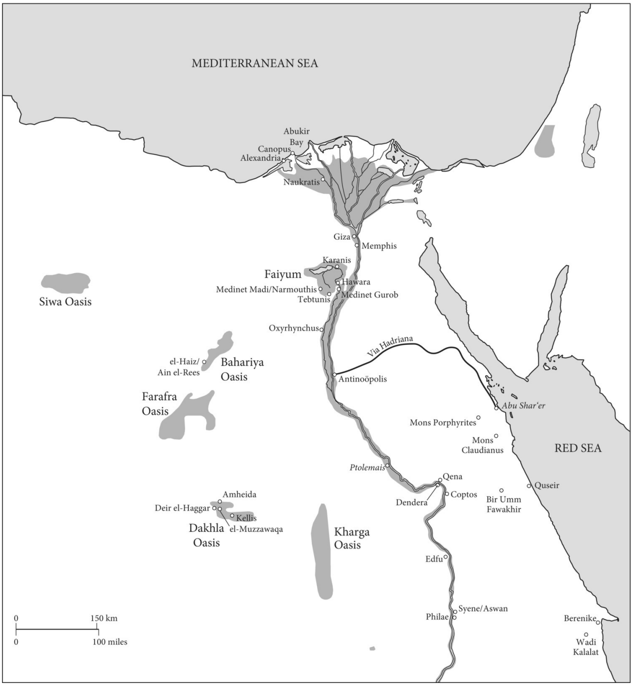
With a full-time professional army, the Macedonian king Philip extended his control over Thrace and much of Greece. His son Alexander was only 20 years old when Philip was assassinated in 336 BC, and the new king soon faced the revolt of the Greek state of Thebes, which he put down. Subsequently, Alexander was elected ruler of the Greek states, except for Sparta, and took his army into Asia Minor (what is now Turkey), where he fought the Persian army at the Granicus River. Freeing the Greek cities in Asia Minor from Persian rule, Alexander continued eastward. In 333 BC he defeated the Persian army, led by the last Achaemenid king Darius III, at Issus. Alexander refused a treaty with Darius and took his army south along the eastern coast of the Mediterranean. Conquering the Phoenician port cities there, he cut off the Persian fleet from their homeland. Persian control of Egypt ended in 332 BC when Alexander and his army entered the country.

In Egypt Alexander supposedly had himself crowned king in Memphis. He founded the city of Alexandria, and visited Siwa Oasis in the far west, where he was declared the son of Amen/Zeus by its oracle. Alexander left Egypt in 331 BC, continuing his conquests eastward. The Persian army was defeated in northern Mesopotamia and Alexander later destroyed their capital, Persepolis. He took his victorious army as far east as what is now Pakistan. But ill with a fever, he died in Babylon in June 323 BC – only 33 years old.

After Alexander’s death a series of wars broke out between factions: those who wanted to hold the huge empire together and those who sought to carve out territories for themselves, and later between the emerging independent powers. Three great kingdoms eventually formed: Macedon, the Seleucid Empire (in Syria and Mesopotamia), and the Ptolemaic kingdom (in Egypt and Cyrenaica, now northern Libya). These three kingdoms were to be in competition and conflict with each other for well over a century until matters came increasingly to be decided by the Romans.

The Ptolemaic kingdom in Egypt was founded by Alexander's governor, Ptolemy, son of Lagus, who became King Ptolemy I in 305 BC. Rulers of the Ptolemaic Dynasty were all his descendants who ruled as pharaohs and did not inter-marry with Egyptians. The last ruler of this dynasty was Cleopatra VII, who committed suicide in 30 BC, after which Egypt became a province of the Roman Empire.

Initially the Ptolemaic kingdom was the most powerful of the three principal kingdoms of Alexander's former empire, expanding their control outside of Egypt to include Palestine, Phoenicia, Cyprus, Cyrenaica, and parts of the Aegean and Anatolia. To control the eastern Mediterranean – and the lucrative trade routes there – the Ptolemies needed a large navy, which required access to Lebanese cedars for shipbuilding. This brought the Ptolemies directly in conflict with the Seleucids. After a series of six Syrian wars, the only foreign regions that the Ptolemies controlled were Cyprus and Cyrenaica.


MEDITERRANEAN SEA
Abukir Bay
Canopus
Alexandria
Naukratis
Giza
Memphis
Karanis
Faiyum
Hawara
Medinet Madi/Narmouthis
Tebtunis
Medinet Gurob
Siwa Oasis
Oxyrhynchus
Via Hadriana
el-Haiz/ Ain el-Rees
Bahariya Oasis
Antinoöpolis
Farafra Oasis
Abu Shar'er
Mons Porphyrites
Mons Claudianus
RED SEA
Ptolemais
Qena
Dendera
Coptos
Quseir
Bir Umm Fawakhir
Amheida
Deir el-Haggar
Kellis
el-Muzzawaqa
Dakhla Oasis
Kharga Oasis
Edfu
Syene/Aswan
Philae
Berenike
Wadi Kalalat
0
150 km
0
100 miles

Map 10.1 Greco-Roman Period sites in Egypt, Libya, and the Eastern and Western Deserts.

The Ptolemaic army consisted of Macedonians and people of many different Greek areas, and increasing numbers of mercenaries and Egyptians. Alexander had learned from the Indians to fight with elephants, but Indian elephants were not available to the Ptolemies, who sent expeditions to the Horn of Africa for African elephants. Transported to Egypt on ships called *elephantagoi*, the animals were used in assaults more or less like tanks in modern warfare. The cost of continued large-scale Ptolemaic military activity abroad, on both land and sea, was of course enormous.

The development that took place in the Ptolemies' royal city, Alexandria, was also very costly. In Alexandria the Ptolemies built many conspicuous monuments, including a sumptuous palace complex (the Brucheion). A royal architect planned the city on a grid, 30 stadia (5 kilometers) long and 7–8 stadia wide, on a stretch of land wedged between the Mediterranean on the north and Lake Mareotis on the south. The great lighthouse of

Alexandria, possibly as high as 135 meters, was built on the western side of the harbor entrance on Pharos Island, which was connected to the city by a long man-made causeway. A main east–west processional road through the city extended eastward to the city of Canopus. Fresh water was supplied to underground cisterns in Alexandria by a canal from the Canopic branch of the Nile.

Ptolemy I founded the Mouseion, a Greek institution of learning which included the famous library, where Greek works were zealously collected from all over the Greek world. Papyri in Egyptian were also collected and the library eventually contained hundreds of thousands of works. Important works were translated into Greek from Egyptian and other languages, including the Hebrew Old Testament, the Septuagint, so called because 70 scholars were supposed to have each made translations. Under Ptolemaic patronage, scholars made advances in science (physics and astronomy), medicine, geography, mathematics (Euclid's geometry), and engineering, and Greek philosophy and literature were also studied there.

Although many pharaonic monuments were relocated by the Ptolemies to Alexandria, the dominant culture of the city was Greek. Alexandria was renowned throughout the Hellenistic world for its art and monuments, its centers of learning, and an impressive festival called the "Ptolemaieia," which aspired to be as important as the Olympic Games. The Ptolemies were buried there along with Alexander the Great, whose body was appropriated by agents of the later Ptolemy I and never reached the intended royal place of burial in Macedon. The location of Alexander's tomb remains unknown.

The Ptolemaic kings were absolute rulers, legitimized as descended from Zeus through Alexander of Macedon, whose bloodline was manipulated to include Ptolemy I. Queens became important co-rulers in this dynasty, in which full brother–sister royal marriages became a regular practice. A kind of cult of the ruler, mainly of the deceased kings, developed in Alexandria, with significance for the Greek subjects of this dynasty.

The Ptolemies actively supported the cult temples of Egyptian gods. In antiquity gods were local, and in a foreign country immigrants needed to relate to the gods of that country. Thus the adoption of local gods by the Ptolemaic rulers was probably the normal course of events. But assuming the Egyptian role as pharaoh – and its ideology – may also have been a means by which the Ptolemies gained a certain amount of socio-political control over the Egyptian population, and the Egyptian cults legitimized them as pharaoh. Through support of the gods' temples and their rituals, the Ptolemaic pharaoh could expect the gods' reciprocity – prosperity and well-being for Egypt – as did the Egyptian pharaohs before. But there were also pragmatic reasons for the Ptolemies to support Egyptian cult temples, which were important centers of indigenous support with large-scale economic functions. A large class of priests and temple personnel existed, some of whom had a fair amount of political power, especially the high priests in Memphis.

Notable temples were built and decorated by Ptolemaic kings in formal Egyptian style, with some innovations in details. Some of the best-preserved temples in Egypt today, such as at Edfu and Dendera, were built in Ptolemaic times, as was much of the complex at Philae, at the First Cataract. This was the cult center of the Egyptian goddess Isis, which gained great prominence during the Ptolemaic Period. The Serapeum in Memphis (see 9.6) became a focus of the important cult of Serapis, in which the Egyptian god Osiris, closely associated with the sacred Apis bull, was anthropomorphized as a bearded Zeus-like figure. A Serapeum was also built in Alexandria, and became an important cult center there. Thus a new triad of deities was invented in what successfully syncretized important Greek and Egyptian deities: Serapis (the supreme god and ruler of the underworld), his wife Isis, and their son Harpocrates (the child Horus), all of whom were associated with healing. The cult of Serapis spread throughout the Mediterranean, as did that of Isis.

Perhaps the most famous ancient Egyptian inscription, the Rosetta Stone, was a decree by priests in Memphis in 196 BC honoring King Ptolemy V upon his coronation. Essentially it was an agreement between the Egyptian priesthood and the king (who was 13 years old then) aimed at ending rebellions in the country. The king gave donations to temples and tax remissions, which the priests reciprocated by pledging to erect statues and stelae honoring the king in Egyptian temples.

For a long time only Greeks held the top government positions in Alexandria and the country was administered through its approximately 40 provinces, which in Greek were called nomes, with Egyptians in the local offices. From its inception Ptolemaic Egypt was a country of two different cultures, Greek in Alexandria and the newly founded cities/towns in the Faiyum region, and Egyptian in the rest of the country. There were also increasing numbers of Jews in Egypt, with a large influx around the mid-2nd century BC. Greek and Egyptian law were practiced in different courts. Decreeing laws, the Ptolemaic king also had judicial authority through the highest judge.

Ptolemaic state bureaucracy was well organized, especially for extracting revenues. The economic base of the state remained cereal agriculture, which was elaborately controlled by the government. Although theoretically the king owned all the land in Egypt, temples were also major land-owners. But there were other types of land holdings, including land allotted to soldiers and government officials in reward for their services.

Introduced into Egypt after Alexander's conquest, free-threshing wheats began to replace emmer wheat. During Ptolemy II's reign large-scale land reclamation was undertaken in the area around the Faiyum lake, where lake levels had greatly declined, and new towns were founded there. The water wheel, which was introduced into Egypt in late Ptolemaic times, made it possible to lift much greater volumes of water to higher elevations than the bucket and lever lift mechanism (*shaduf*) introduced in the 18th Dynasty. More intensive cultivation and control of yields thus helped to assure substantial royal revenues.

Foreign trade was another important source of revenue for the Ptolemies. The Delta canal of the Persians was restored and Ptolemaic ships sailed to the southern Red Sea region, not only for war elephants, but probably also for the exotic raw materials that pharaonic Egypt had obtained from Punt. Some ships also ventured to regions along the Indian Ocean, and Alexandria became a major consumer as well as a trading center of exotic imported goods.

Ptolemaic crafts were desired throughout the Mediterranean world and beyond. A type of fused glass bead from Ptolemaic Egypt, made with the design of a human face, has been found in burials at Meroe and at Aksum (in northern Ethiopia). Papyrus grew in Egypt and, as earlier, the manufacture of this plant into a writing material was an important industry in Ptolemaic times. With a higher degree of literacy and writing in the Greek world, papyrus was the most desirable writing material. The English word "paper" is derived from the Greek "papyrus," which is possibly derived from an Egyptian term for this material.

As in pharaonic times, mining and quarrying in the desert regions were controlled by the state. Although historical sources report that the gold mines in the Wadi Allaqi (to the east of Lower Nubia) were reopened in Ptolemaic times, investigations of these sites have demonstrated that Ptolemaic gold mining was confined to the central Eastern Desert of Egypt, at sites mined in the New Kingdom. Two Ptolemaic coins have been found at the site of Deraheib in the eastern Wadi Allaqi (in the Eastern Desert to the east of Lower Nubia and only 75 kilometers from the Red Sea). There is much evidence of gold mining in this region, but pottery at the site suggests that it was occupied later, mainly in Byzantine times (post-3rd century AD). Remains include a planned settlement and two fortresses.

The decline of Ptolemaic rule in Egypt occurred gradually. Power conflicts between Ptolemaic siblings sometimes led to murder, and the mob in Alexandria played a role in this. Increasingly, Rome intervened in the Ptolemies' conflicts. Civil unrest, civil war, economic breakdown, corruption – all occurred during the reigns of the later Ptolemies. Nonetheless, temple building and decoration continued in Egypt on a large scale.

Rome gained control of Cyrenaica in 96 BC, and of Cyprus in 58 BC, although these countries briefly reverted back to Egyptian control during what was supposed to be the co-regency of Cleopatra VII and her brother Ptolemy XIII. But Ptolemy XIII died in battle against Julius Caesar, who had a relationship with Cleopatra. Ptolemy XIV was made co-ruler with his sister Cleopatra, but after Caesar's assassination in Rome, she had this brother murdered. With the defeat of Cleopatra's lover and political ally Marc Antony at Actium in 31 BC, this female ruler and her son by Caesar, Ptolemy XV Caesarion, both perished. They were the last Ptolemaic rulers of Egypt.

10.2 The Roman Period: Overview

At the top Roman Egypt was ruled quite differently from Ptolemaic Egypt. Most Roman emperors never visited the country, which was governed by a well-organized bureaucracy headed by the prefect (a viceroy/governor). The prefect was Roman, of high (equestrian) rank, who was appointed by the emperor. The country was greatly exploited for its resources, especially its agricultural wealth, with Egypt providing as much as a third of the grain for the city of Rome, to support its disenfranchised population.

Roman citizens were of the highest social status in Roman Egypt. Below them was a social class made up of inhabitants of the four major Greek cities: Alexandria, Naukratis, Ptolemais (in Upper Egypt), and later Antinoöpolis, the only new city founded in Egypt by the Romans. (During Hadrian's visit to Egypt in AD 130–131 his lover Antinous drowned in the Nile, and the emperor founded the city in commemoration of this young man.) The third social class consisted mainly of Egyptians and all others who were not of the two higher classes. All Egyptian males (14–62 years old) had to pay an annual poll tax, but among this class the *metropoleis*, who were higher-status residents of the chief nome towns, paid reduced rates. At the bottom of the social strata was a large class of slaves.

Alexandria was the center of Roman Egypt, where the Romans built temples and other public monuments, and existing sites on the Mediterranean coast to the east and west of the city were also occupied. As the great commercial center of Roman Egypt, Alexandria had numerous warehouses in its harbor area, and huge granaries must have existed which supplied the grain ships that left for Rome every year in May or June. Although little is known archaeologically about its industries, Alexandria was certainly an important shipbuilding center. Highly desired craft goods, especially papyrus, linen, and glass vessels and beads, were produced there. Jewelry in gold or silver with imported gems, and other metal artifacts, including lamps and vessels in silver or bronze, were also made there. Pottery was made not only for indigenous use, but also for export, including containers for wine produced in the region.

For administrative purposes, Egypt was divided into four major regions, each of which was headed by an *epistrategos*, who was a Roman of equestrian class. As in Ptolemaic Egypt, the country was further divided into smaller units of nomes, which were administered by *strategoi*, who were Greco-Egyptians. One of the nome capitals, Oxyrhynchus in Middle Egypt, has provided a huge amount of information about local administration, recorded on well-preserved papyri. From 1898 to 1908 over 100,000 fragments were excavated by two British scholars, B. P. Grenfell and A. S. Hunt, in rubbish mounds of the ancient town, over 6 meters deep.

Oxyrhynchus is so named because a sacred fish with a pointed head was worshipped there. The Oxyrhynchus papyri include texts with information about daily life and economic affairs in the town, and also a large collection of literary works in Greek (as well as some lost works of history and philosophy), and a few in Latin. More than 100 years since their discovery, papyri from Oxyrhynchus continue to be reconstructed from fragments and translated at Oxford University, under the direction of Dirk Obbink, with 77 volumes published thus far. New imaging techniques, such as MSI (magnetic source images), have helped to enhance the reading of these texts.

Roman control of Egypt was first enforced by three legions of the army (later two), along with auxiliary troops and cavalry units. Garrisons were placed throughout the country with forts and stations along desert routes. Essentially the troops were there to ensure Roman governance of the population, extraction of taxes (the grain tax) and other resources (including gold mined in the Eastern Desert), and protection of the desert routes leading from quarries and from ports on the Red Sea. Roman troops in Egypt were also used in military campaigns to the east, such as against the Jewish revolts in the 1st and 2nd centuries AD, and the conquest of Arabia.

But even with the substantial Roman military presence in Egypt, there were still internal rebellions, with especially unfortunate consequences for Alexandria. In the 1st century AD conflicts occurred in the city between the Greeks and the large Jewish population there; many Jews were violently killed and their synagogues attacked. As a result of the Jewish revolt in AD 115–117, which began in Cyrene and spread east, huge numbers of Jews were slaughtered, not only in Alexandria but also throughout

Egypt. During the reign of Marcus Aurelius, a revolt occurred in the Delta (171–172), brought on by a widespread plague. In 215, during Caracalla’s visit to Egypt, the emperor ordered the youths of Alexandria to be slaughtered. Queen Zenobia of Palmyra (Syria) conquered Egypt in 270, with much damage to Alexandria when the Romans retook the country. Another rebellion occurred during Diocletian’s reign, with Alexandria under siege for eight months (296–297).

In the far south of Egypt, when Roman troops were withdrawn from Syene (Aswan) in 24 BC for the Arabian campaign, the city was sacked by the Kushites. Syene had been the negotiated boundary between the two powers, and Roman forces of Gaius Petronius invaded Nubia. Qasr Ibrim, where the 25th-Dynasty Kushite king Taharqo had built a mud-brick temple, was fortified by the Romans, and their army moved upstream, sacking the religious center of Napata. Eventually the Kushites, whose capital was at Meroe, sued for peace with Augustus, and the border was extended about 100 kilometers south of Aswan. Large-scale Roman reoccupation of Lower Nubia occurred, and there are several temples which date to Augustus’s reign. Qasr Ibrim, about 238 kilometers south of Aswan, was occupied by the Kushites and the site became a major Meroitic center.

Meroe continued to be the seat of the kingdom, with royal pyramids built in cemeteries to the east of the city. But by ca. AD 350–360 this very long-lived state had collapsed. Graffiti in Ge’ez, the written language of the Aksumite state, located in what today are northern Ethiopia and Eritrea, have been found at Meroe – evidence of an Aksumite raid there. It is likely that with the development of Roman trade with southern India via the Indian Ocean and Red Sea, Meroe became more marginalized as a source of the exotic raw materials from the Horn of Africa, as Aksum’s seaport of Adulis became the port of call.

In Ptolemaic times ports were founded on the Red Sea, especially during the reign of Ptolemy II. These included Berenike and Myos Hormos (probably the site of Quseir el-Qadim), which were reached via desert routes from Coptos and Edfu in Upper Egypt. In Roman times trade goods from the southern Red Sea region and India, as well as quarried stone from the Eastern Desert, were carried overland via the desert routes to the Nile and then taken downstream by ship or barge to Alexandria. Along these desert routes the Romans built posts and dug deep wells, still visible today. Two desert routes from Qena passed near the important quarrying sites of Mons Porphyrites and Mons Claudianus. At Mons Porphyrites imperial purple porphyry was quarried – the only known source of this rock in the world. Used in major Roman monuments, purple porphyry can still be seen as reused columns in early churches in Rome. Mons Claudianus was the source of a special grey granodiorite, while the pharaonic granite quarry at Aswan also continued to be exploited by the Romans.

In the Western Desert the Romans exploited the oases (especially Kharga and Dakhla) for their produce. At Dakhla Oasis nearly 250 sites that date to the 1st–5th centuries AD have been located. Irrigation farming was practiced intensively throughout the oasis and evidence of huge aqueducts has been found at Deir el-Haggar, extending from spring mounds to the area of cultivated fields. Bahariya Oasis was also farmed during the Roman Period, and archaeologists of the Supreme Council of Antiquities (SCA) have been excavating a huge cemetery there with multi-chambered rock-cut tombs for possibly thousands of mummies, many of which were buried in family groups. Although some decorated tombs in Bahariya Oasis date to the 26th Dynasty, the Roman Period ones come from an area popularly known as the "Valley of the Golden Mummies." Gold foil still covers the masks of the higher-status burials, which have not been robbed.

The Roman Period burials at Bahariya Oasis demonstrate the continuing importance of ancient Egyptian mortuary beliefs. Decoration on a female mummy from Tomb 54 (Mummy B) includes images of protective Egyptian deities, and although the hairstyle is Roman, the clothes are Egyptian in style.

At Hawara in the Faiyum Flinders Petrie excavated a large number of intact mummies from the Roman Period that were buried in coffins decorated with images of Egyptian gods and scenes relating to the mortuary cult, but with inset portraits painted on wooden panels (the "Faiyum mummy portraits"). Other similar coffins have since been found in other parts of Egypt. In these portraits the deceased is shown with Roman dress and jewelry, painted in an illusionistic style that is Greco-Roman and not Egyptian. In Alexandria, high-status burials in a complex of underground tombs and chambers of the Kom el-Shuqafa, which date to the 2nd century AD, also show a mixture of Egyptian and Greco-Roman architecture, decoration, and mortuary beliefs.

Under the Romans construction and decoration of Egyptian temples continued, and some earlier structures were repaired, including the Giza Sphinx. On temple walls Roman emperors were portrayed as Egyptian pharaohs honoring the gods and their names were carved in hieroglyphs in cartouches. Several Egyptian cults were popular throughout the Roman Mediterranean world outside of Egypt – including Rome. The cult of Isis, which had been popular outside of Egypt in Ptolemaic times, continued to be so in Roman times. But the Romans in Egypt also had temples of their own deities, and there were Greek cults which had not been syncretized with Egyptian ones. Egyptian priests continued to be trained to read Egyptian religious texts and perform temple rites, but there was a decrease in temple support and in the status of these priests.

Although persecuted by the Romans, Christianity by the late 2nd century was becoming increasingly accepted in Alexandria, where the local schools of Greek philosophy influenced the development of early Christian thought. In the next century the new religion spread throughout Egypt. When the emperor Constantine decreed the Edict of Toleration in 311, the religion gained legal status in the Roman Empire. There were certainly conflicts in Egypt between Christians and worshippers of the traditional cults, and Christianity was still not widely accepted. But Christians were intolerant of pagan religion, and in 392 the emperor Theodosius decreed that Egyptian temples be closed – which actually occurred more gradually over the next two centuries.

Egyptian Christians used the Coptic alphabet, based on the Greek one, to write their spoken language – the last phase of the language spoken by the pharaohs. The last known hieroglyphic text was written at Philae in 394, with the last demotic text there dating to 452. Although a treaty was made in 451–452 with the Blemmyes and Nobadae, tribal groups of the Eastern Desert and Nubia, allowing them to continue worshipping there, Philae was finally converted into a church by ca. 575.

Christianity brought about the end of pharaonic Egypt – there were no more pharaohs who patronized the cults of Egyptian gods in temples with walls inscribed in the “sacred writing” of hieroglyphs, the most tangible and recognizable evidence of this very long-lived civilization. Christian beliefs of the afterlife were also very different from ancient Egyptian ones, and the concept of a mortuary cult with associated deities was alien to Christians. The monastic movement was invented in Egypt, with monks living in isolated places, including ancient tombs, which had been robbed long before. Alexandria, the great center of learning and cults of Greco-Roman Egypt, became the seat of the church Patriarch.

Despite over 1,000 years of intermittent rule and conquest of Egypt by foreigners, from the Kushite kings of the 25th Dynasty to the Roman emperors, pharaonic civilization was visibly present throughout Egypt. Under Roman rule there was a decline of state support for temples and the indigenous elite, but the cults of pharaonic gods continued to be practiced. Foreign conquest did not bring Egyptian civilization to an end; this occurred with the increasing acceptance in Egypt of a new monotheistic religion that was intolerant of many – and all other – gods.

10.3 Alexandria

Alexandria suffered much destruction in the political disruptions of the later 3rd century AD. After riots between pagans and Christians in 391, the great Serapeum temple was destroyed, and many temples were eventually converted into churches. Earthquakes also took their toll in Alexandria, including major parts of the harbor-front, which are now submerged. When the invading Muslim army entered the city in 642, however, there was still much impressive monumental architecture. As Alexandria became an Islamic city more rebuilding occurred when many churches were transformed into mosques. Today with many ancient remains covered by the modern city (thus precluding excavation), much of what is known about the Greco-Roman city is from textual information, especially descriptions of the Greek geographer Strabo, who visited Alexandria in the early years of Roman rule.

The first systematic excavations in Alexandria were ordered in 1866 by the Khedive of Egypt. They were conducted by Mahmud

Bey, who later published a plan of the Roman Period city, with streets, canals, and the city wall (Figure 10.1). Another map of the city in the late 19th century, locating the known ancient remains, was also published by Mahmud Bey. With the founding of the Greco-Roman Museum in Alexandria in 1892, observations and excavations of ancient remains there have been conducted under the museum’s auspices.

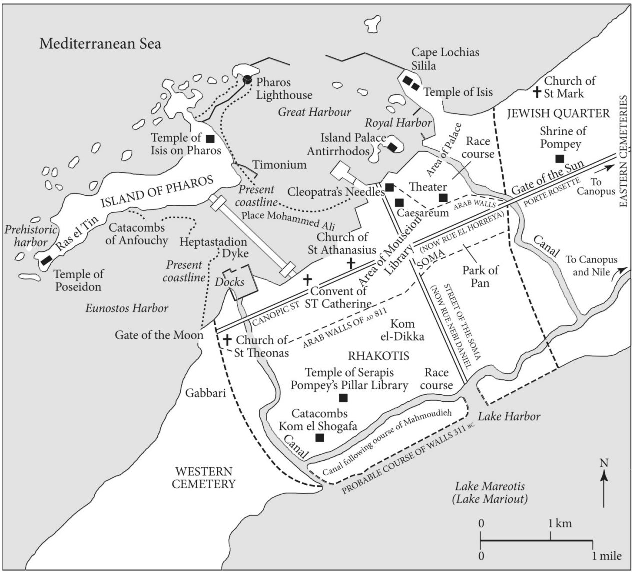

Mediterranean Sea
Cape Lochias
Silila
Pharos
Lighthouse
Temple of Isis
Church of
St Mark
Great Harbour
Royal Harbor
JEWISH QUARTER
Temple of
Isis on Pharos
Island Palace
Antirrhodos
Area of Palace
Race
course
Shrine of
Pompey
EASTERN CEMETERIES
Timonium
ISLAND OF PHAROS
Present
coastline
Cleopatra’s Needles
Theater
Gate of the Sun
To
Canopus
Caesareum
ARAB WALLS
PORTE ROSETTE
Place Mohammed Ali
Prehistoric
harbor
Ras el Tin
Catacombs
of Anfouchy
Heptastadion
Church of
St Athanasius
Area of Mouseion
Library
(NOW RUE EL HORREYA)
SOMA
Canal
To Canopus
and Nile
Dyke
Present
coastline
Temple of
Poseidon
Docks
Convent of
ST Catherine
Park of
Pan
Eunostos Harbor
CANOPIC ST
ARAB WALLS OF AD 811
Kom
el-Dikka
STREET OF THE SOMA
(NOW RUE NEBI DANIEL)
Gate of the Moon
Church of
St Theonas
RHAKOTIS
Temple of Serapis
Pompey’s Pillar Library
Race
course
Gabbari
Catacombs
Kom el Shogafa
Canal following course of Mahmoudieh
Lake Harbor
Canal
PROBABLE COURSE OF WALLS 311 BC
WESTERN
CEMETERY
N
Lake Mareotis
(Lake Mariout)
0
1 km
0
1 mile

Figure 10.1 Plan of the city of Alexandria.

Source: Ian Shaw (ed.), *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000, p. 406. Used by permission of Oxford University Press.

Ancient Alexandria was a Greco-Roman city, with little Egyptian-style architecture, as is evident from the excavations of the Polish Center of Mediterranean Archaeology (Warsaw University) on the Kom el-Dikka. Roman baths (3rd century) have been uncovered with rooms for warm and cold baths and a steam-room, near a complex of cisterns which stored water underground. Located near this complex was a Greek-style theater with white Italian marble columns (4th–7th centuries), which has been restored. (A number of theaters are known in the city from textual sources, and the Roman city also had a hippodrome, where chariot races continued to be a great public spectacle in Byzantine times.) In this area the

Polish archaeologists have excavated large houses (*villa urbana*) dating to the 1st–3rd centuries, which were subsequently replaced by smaller ones of the 4th–7th centuries. They have also uncovered the first evidence of Alexandria's university – a building with 13 lecture halls, each arranged with stepped benches on three sides of the room.

Impressive monumental finds, which may have formed part of the lighthouse complex, have been excavated at an underwater site to the east of the Islamic Qaitbay Fort by Jean-Yves Empereur, Director of the Centre d'Études Alexandrines (Plate 10.1). These include Ptolemaic royal statues and pharaonic monuments, such as obelisks, sphinxes, and columns, many of which were taken from Heliopolis. Remains of an earlier Greek city, Herakleion/Thonis, have also been located at an underwater site in the Bay of Abukir, about 22 kilometers east of Alexandria, where Admiral Lord Nelson defeated Napoleon Bonaparte's fleet in 1798. The sea finds from Herakleion suggest that Delta temples could have been built on a very large scale – which is not known from the preserved evidence of temples on land.

Empereur has also done rescue excavations in the Gabbari district of Alexandria (to the west of the ancient city), where a burial complex was discovered during the construction of a highway. Forty-three tomb complexes for multiple burials were located – one of which contained ca. 250 rectangular burial niches cut in the bedrock (Plate 10.2). Sometimes as many as 12 skeletons were found in one niche, the earlier ones simply being shoved aside for a later burial, and the niche was closed off by a stone slab. These tombs were destroyed, however, when the site was bulldozed and construction began on the Gabbari bridge in 2000.

The rescue excavations in the Gabbari district tombs uncovered thousands of ceramic lamps and vessels, as well as other artifacts associated with Greek mortuary rites. Although Empereur also found some Egyptian mummies with gold foil on the faces of their cases, these catacomb tombs seem to have been used mostly by Alexandrines who adhered to Greek (and not Egyptian beliefs) about burial and the afterlife, with Greek inscriptions identifying some of the occupants. Cremation burials in urns were also found – a distinctly non-Egyptian type of burial known in the Greek (and later Roman) world. Cross motifs on artifacts and in wall niches identified the later reuse of some of the tombs by early Christians.

Large, multi-roomed tombs for multiple burials of high-status persons are known elsewhere in Alexandria, such as at Shatby and Kom el-Shuqafa, and along the coastal region to the west of the city. The rock-cut substructures of these tombs often contain elements of Greek then Roman funerary architecture, as well as Egyptian temple architecture – and decorations, both painted and in relief, that combine Egyptian symbols and scenes pertaining to the afterlife with classical motifs.

10.4 Greco-Roman Settlements in the Faiyum

A number of the new settlements that were founded in the Faiyum region during the reign of Ptolemy II continued to be quite prosperous in Roman times. Both illicit and legitimate excavations of these sites have yielded huge numbers of well-preserved papyri and ostraca with texts in Greek, Demotic, and Coptic.

Also from the Faiyum come the famous "Faiyum mummy portraits," excavated by Flinders Petrie in a large Roman Period cemetery to the north of a Middle Kingdom pyramid (Amenemhat III's) at Hawara (Plate 10.3). But other contemporaneous burials that were more traditionally Egyptian in decoration were also excavated in this cemetery. A Ptolemaic cemetery that Petrie excavated at the mainly pharaonic site of Medinet Gurob in the Faiyum yielded many Greek and Demotic texts, from private letters and wills to works of the Greek classics. The papyri were reused (and thus preserved) as the underlying material for the cartonnage mummy cases, otherwise usually made of plastered cloth.

After spectacular finds of papyri in 1899–1900 by Grenfell and Hunt, the site of Tebtunis (Tebtynis) on the southern edge of the Faiyum was excavated early in the 20th century by German and then Italian archaeologists. More recently a French–Italian team (the French Institute of Archaeology in Cairo and the University of Milan) has been excavating the site, and in an ancient dump they have uncovered ca. 6,000 texts, mostly in Greek and Demotic, on papyri and ostraca. There are also hieratic (Egyptian) papyri, and texts in Aramaic, the Near Eastern *lingua franca*, have revealed the existence of a Jewish community at Tebtunis in the 2nd century BC. Founded in the Middle Kingdom, the town gained importance in the Greco-Roman Period when it was an administrative and economic center, with a cult temple of the crocodile god Soknebtunis. A major center of Egyptian culture in Greco-Roman times, the town has yielded the most important provenanced finds of late literary texts (in Demotic). The town continued to be occupied until the mid-13th century AD.

Finds from the recent Tebtunis excavations include many rolled papyri, still sealed with lumps of clay, that were addressed to the temple oracle – frequently asking the oracle to identify thieves. A demotic papyrus in the Cairo Museum that describes the Soknebtunis temple led the excavators to the discovery of a large processional way (*dromos*), 14 meters wide, along part of which about 100 sheep and goats were buried in small graves near the temple, as offerings in the 1st–2nd centuries AD. To the east of the temple, well-preserved houses dating from the 3rd century BC to the 2nd century AD have been excavated, including a 2nd-century BC baker's house with the remains of four ovens and three granaries. To the west of the temple and within the foundations of a Roman ”tower house” were the remains of public baths of the 3rd century BC with limestone tubs. In the late 2nd century BC new baths were built nearby that included bathtubs and smaller basins, with groups of rooms for men and women.

Italian archaeologists have also been working in the southwestern Faiyum region at Medinet Madi, the site of the Greco-Roman town of Narmouthis. The site was excavated early in the 20th century, with large-scale excavations conducted by the University of Milan, 1934–1939 and from 1966 onward; the later excavations have been directed by Edda Bresciani (University of Pisa). This was also the site of a Middle Kingdom temple, and the town continued to be used in Byzantine times (at least seven churches were built) and well after the Muslim conquest. Recently the Roman military camp (*castrum*) there was located using a satellite image, and excavations began in 2006. The 50-meter-square *castrum* had mud-brick walls almost 4 meters thick and a vaulted cistern cut deep into the bedrock that was connected to a sophisticated hydraulic system for supplying it with water.

Many Demotic and Greek texts have been found in Narmouthis, as well as later Coptic and Arabic ones. Ptolemaic temples there included one where crocodiles were kept in a special room. Cults of crocodile deities were quite prominent in the Faiyum, and many mummified crocodiles, from babies to adults, have been found in Greco-Roman cemeteries in the region.

In the northeastern Faiyum, the town of Karanis was founded by Ptolemy II. Although some parts of the town had been destroyed by *sebbakh* diggers, excavations from 1924 to 1935 by the University of Michigan/Kelsey Museum of Archaeology (first under the direction of J. L. Starkey, and later by E. E. Peterson), revealed strata of well-preserved mud-brick houses, some with paintings still on the plastered walls. Large Roman "tower houses" two to three stories high were sometimes preserved, often with vaulted underground storage rooms. Similar houses have been found at other Greco-Roman settlements in the Faiyum, including the one at Tebtunis. Largely unpublished finds by Cairo University excavations at Karanis (1966–1975) include Roman baths as well as houses.

The artifactual evidence from the American excavations at Karanis, along with the many excavated papyri and ostraca, provide much information about daily life of non-elites from the 3rd century BC to the 6th century AD. Household artifacts, such as baskets, ovens, grinding stones, and storage jars, were found *in situ* inside the houses or in their courtyards. Many of the 27,000 coins came from hoards – attesting to economic insecurity. Excavated textiles were so well preserved that a study was done on 3,000 samples, providing a chronological sequence and information about weaving techniques, and locally produced textiles versus imported ones. Because of the Kelsey Museum's documented excavations at Karanis, of well-preserved domestic contexts and associated texts, detailed socio-economic studies, such as have been done for the New Kingdom workmen's village of Deir el-Medina (see 8.11), should yield interesting results for Karanis.

In 2005 the UCLA-RUG Fayum Project (of the University of California, Los Angeles, and the Rijksuniversiteit, Groningen, the Netherlands) began a site-management project at Karanis. Since the earlier American excavations there did not backfill the excavation trenches, much erosion of structures has occurred since the 1930s, and the new project includes making a virtual reality model of the site as well as investigations directed at conservation of the remaining architecture. New excavations in areas where the University of Michigan project did not excavate have uncovered one of the largest known granaries as well as a domestic context in the central part of the site with archaeobotanical and zoological material.

The Greco-Roman towns in the Faiyum were basically organized around a temple and its processional way (*dromos*). Some of these towns show strict orthogonal planning from the earliest phase of Ptolemaic building, with grids of, north–south and east–west streets. Other towns in the Faiyum were less strictly organized along the *dromos*. According to Wolfgang Müller, the latter type consisted of towns with houses located along secondary streets which were parallel to or crossed the *dromos*, or more frequently, towns with houses organized more agglutinatively around the temple precinct,

10.5 Two Greco-Roman Temple Complexes in Upper Egypt: Dendera and Philae

The Greco-Roman temples discussed here are a very small sample. Basically much of what has survived are provincial temples built of sandstone in the far south of Egypt and in Nubia. Blocks of temples built in limestone farther north in Egypt were often recycled, and the southern temples have a disproportionate prominence in the evidence.

Dendera was the capital of the 6th Nome of Upper Egypt. Although temples were constructed there from the Old Kingdom onward, the buildings visible there today date to Greco-Roman times (Figure 10.2). The main temple was built for the cult of the goddess Hathor, with a much smaller temple for (the birth of) Isis to the south.

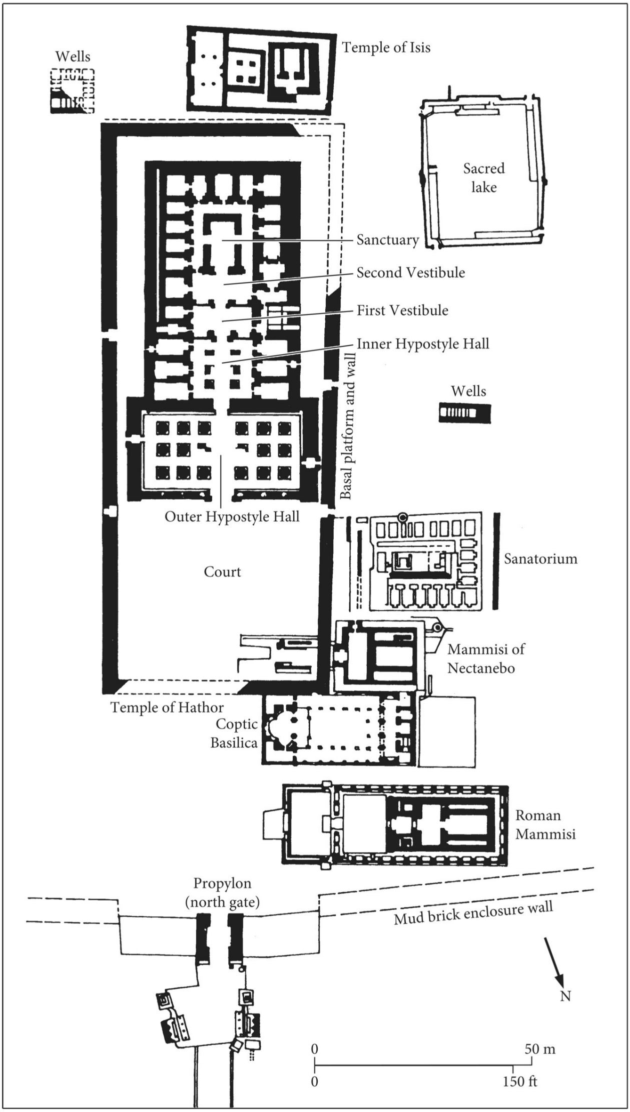

Wells
Temple of Isis
Sacred lake
Sanctuary
Second Vestibule
First Vestibule
Inner Hypostyle Hall
Basal platform and wall
Wells
Outer Hypostyle Hall
Court
Sanatorium
Mammisi of Nectanebo
Temple of Hathor
Coptic Basilica
Roman Mammisi
Propylon (north gate)
Mud brick enclosure wall
N
0
50 m
0
150 ft

Figure 10.2 Plan of the Greco-Roman temple of Hathor at Dendera.

Source: Ian Shaw (ed.), *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000, p. 440. Used by permission of Oxford University Press.

Flinders Petrie did a survey at Dendera in the late 19th century, and excavations were conducted there 1915–1918 by Clarence

Fisher of the University Museum, University of Pennsylvania. The French Archaeological Institute, Cairo (IFAO) later mapped the temple enclosure and the cemetery, which includes important tombs of the Old Kingdom and First Intermediate Period. Auguste Mariette was one of the early scholars to study the temple inscriptions, with systematic publication of the inscriptions in the 20th century by French scholars Émile Chassinat, François Daumas, and Sylvie Cauville. Architectural studies of the Hathor temple have been conducted by Pierre Zignani.

The Dendera temple was surrounded by a huge mud-brick wall, entered through a gate on the north side, which was built during the reigns of the Roman emperors Domitian and Trajan. Most Egyptian temples were oriented toward the Nile and the unusual orientation of this temple (facing north) is due to the bend in the river, which flows from east to west there.

The temple's ground plan is of classic formal design, with outer and inner hypostyle halls leading to an offering hall and sanctuary, which are surrounded by 11 chapels. The courtyard and northern wall are unfinished. To either side of the offering hall are staircases leading to the inner temple's roof, where there are rooms dedicated to the cult of Osiris. The ceiling of one of these chapels was decorated with the famous "zodiac" relief, removed by Napoleon Bonaparte's expedition and now in the Louvre Museum (Figure 10.3). Recent research demonstrates that the Dendera priests had a sophisticated knowledge of astronomy: rites inaugurating these chapels took place on December 28, 47 BC, on the day of a full moon at zenith – a conjuncture that only occurs every 1,480 years.

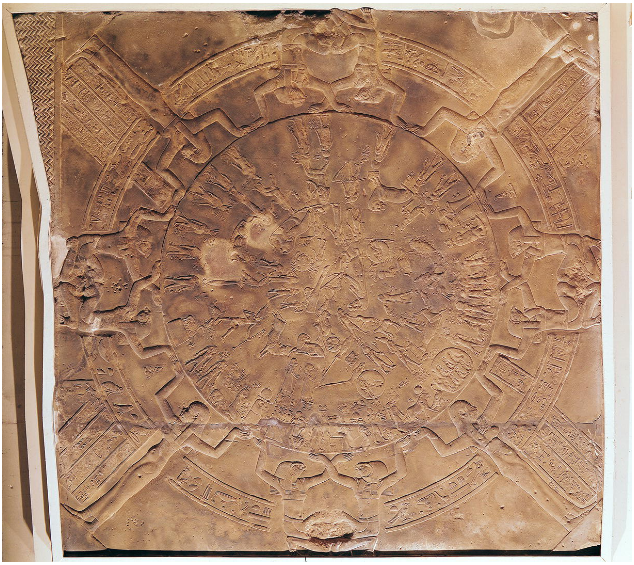


Figure 10.3 The Ptolemaic zodiac relief from the ceiling of a small chapel in the Temple of Hathor, Dendera, now in the Louvre Museum, Paris.

Source: Musée du Louvre, Paris, France/The Bridgeman Art Library.

The inner temple was built in late Ptolemaic times. Many cartouches there were never inscribed with kings' names – reflecting conflicts in the royal family. Decorated "crypts," rooms and spaces for storing temple equipment and texts, were located in this part of the temple, within the outer wall.

On the temple's southern exterior wall are reliefs of the last Ptolemaic rulers, Cleopatra VII and her son by Julius Caesar, Ptolemy XV Caesarion. The temple's northern façade, behind which is the outer hypostyle hall, was dedicated during the reign of Tiberius.

To the northwest of the temple are four buildings: a "sanatorium," two "birth" houses, and a church. The sanatorium was where visitors came to be magically healed, either through bathing in sacred water, or incubation – hopefully dreaming of the goddess's healing while sleeping there. Birth houses (*mammisi*), were built within temple precincts to celebrate the divine birth of the deity's offspring, in this case Hathor's son Ihy. The earlier birth house at Dendera is Ptolemaic, but was begun during the Late Period. The later one dates to the 1st century AD, built under Augustus and decorated during Trajan's reign. The early Coptic church, which is located between the two Dendera birth houses, dates to the 5th century.

Philae Island at the First Cataract was the site of a very impressive temple complex built mainly in Greco-Roman times (Plate 10.4). The temples were submerged after construction of the first Aswan Dam, and after the Aswan High Dam was built in the late 1950s plans were made by UNESCO to move the entire Philae complex to higher ground on nearby Agilkyia Island. But even before the temples could be dismantled, the entire complex had to be surrounded by a huge coffer dam and water was pumped out. The rebuilding was finally completed in 1980, and the Philae temples can now be seen in the same relative arrangement as on Philae Island.

One fortuitous aspect of this project is that as the Philae temples were dismantled, earlier structures and reused blocks were revealed, extending back in time what is known about the temple complex. Although the earliest dated monument on Philae was a small 26th-Dynasty kiosk of Psamtek II, even earlier mud-brick houses on the island's west side may date to the 25th Dynasty (Kushite). Another Saite king, Amasis, built a small temple on the island. The last indigenous ruler to build there was the 30th-Dynasty king Nectanebo I, who erected a monumental gate and a large kiosk, later dismantled and re-erected overlooking the river on the island's southwestern side.

With the Ptolemaic Dynasty Philae became a great cult center for the goddess Isis. To the north of Amasis's temple, a new temple was built with scenes and inscriptions of Ptolemy II on the interior. In the temple's sanctuary, the stand for the goddess's bark is inscribed with the cartouches of Ptolemy III and his wife Berenike. This king's name also appears in the oldest parts of the *mammisi*, similar to that at Dendera, which was erected to the southwest of the Isis temple.

With the dismantling of Amasis's temple, a space was cleared for a colonnaded area and a pylon, which were added onto the southern side of the Isis temple. The old mud-brick enclosure wall was also removed and the great (first) pylon was built to either side of Nectanebo's gate by Ptolemy VI. During the reign of Ptolemy VIII the *mammisi* was enlarged, and decoration of the exterior walls continued into the Roman Period.

Other structures in the Philae complex include temples of Hathor and Horus the Avenger (Harendotes). There is also a Ptolemaic temple for the Nubian deity Arensnuphis (later converted into a church), and a chapel for the deified Imhotep (Asklepios), the 3rd-Dynasty architect of Djoser's Step Pyramid at Saqqara. Two nilometers were carved in the rock on the western side of the island, to measure the height of the annual Nile flooding there.

During Roman times a considerable amount of building was undertaken at Philae. Under Augustus eastern and western colonnades were built to the south of the first pylon, and a temple was erected on the north side of the island. A gateway to the west of the main temple was built under Hadrian, and a gateway and quay were built on the island's northeastern side under Diocletian. Perhaps most impressive architecturally is the kiosk of Trajan, with 14 columns between which are screen walls with huge stone architraves above (Plate 10.5).

Although the Blemmyes and Nobadae were allowed to continue to worship in the Philae Temple of Isis (in an agreement of 451–452), two churches on the northern side of the island co-existed with the temple. In the later 6th century the temple's columned hall was finally converted into a church.

Sites Outside the Nile Valley

10.6 The Western Desert: Bahariya and Dakhla Oases

In Greco-Roman times Bahariya Oasis was an important stop along the routes that crossed the Western Desert – used for both commercial and military activities. Alexander the Great may have passed through this oasis after he had visited the oracle in Siwa Oasis. A temple at Ain el-Tabinieh in Bahariya Oasis is carved with reliefs of Alexander presenting offerings to Amen, and his name appears in cartouches.

About 45 kilometers south of Bahariya Oasis on the route to

Farafra Oasis is the town of el-Haiz, which was briefly investigated in 1940 by Egyptian archaeologist Ahmed Fakhry. Excavations there by the Supreme Council of Antiquities (SCA) have uncovered the mud-brick remains of a large Roman Period fortress, next to which is a Roman "palace." Also at this site (Ain el-Rees) are a Roman Period cemetery, which has only been partially excavated (in 1900), and an early Coptic church.

In Roman times Bahariya Oasis was a wine-producing region, although more favored wines came from Dakhla and Kharga Oases. At Bahariya Oasis evidence of a winery has been found to the west of the Roman fortress at Ain el-Rees, where Egyptian archaeologists have identified concentrations of grape seeds and sherds of wine jars. According to Zahi Hawass, who directed the SCA excavations in Bahariya, the largest room in this building was where the grapes were sorted and then washed. The better-quality fruit would have been taken to a processing room, with a depression in the center where the grapes were pressed. There are also the remains of a series of spouts, channels, and basins for making different mixtures/types of wine.

The large Greco-Roman cemetery at Bahariya Oasis, known as the "Valley of the Golden Mummies," was accidentally discovered in 1996 when an SCA guard of Alexander the Great's temple was crossing the site and his donkey stumbled in a hole – which turned out to be a tomb. Five tombs have been excavated containing 105 mummies and many more are expected to be uncovered. According to Hawass, the mummies date from the time of Alexander to the 4th–5th centuries AD, based on decoration found on them and tomb types. The tombs were carved in the sandstone bedrock, with niches along the sides of a main corridor where the mummies were placed side by side (and if these were full, on the tomb's floor). The larger tombs were entered by a rock-cut staircase. One tomb consists of a vertical shaft with four chambers at the bottom, the entries of which were carved in the style of a Greek temple – a simpler version of the much more elaborate 2nd-century tombs of the Kom el-Shuqafa in Alexandria.

Four different types of mummies have been found at Bahariya, which probably relate to their socio-economic status (but may also reflect changes through time). Of the 105 mummies, 60 have gold-covered masks on their cartonnage casings (plastered and molded linen), and some of them are decorated with gold foil over the chest – these are the highest-status burials (Plate 10.6). The next level of burial consists of mummies wrapped in linen with cartonnage over the upper parts – decorated with painted facial features and images of Egyptian deities. A third type of burial was wrapped in linen that was often arranged in geometrical patterns, but with no painted cartonnage or other decoration. The lowest-status burials were poorly wrapped in linen. In the future it will be useful to have age/sex data for these mummies, as well as paleopathological analyses to identify prevalent diseases, nutritional deficiencies, evidence on bones of stress or accidents, and causes of death. DNA studies may be able to determine genetically related individuals and possibly some diseases.

During the Roman Period Dakhla Oasis, to the south of Bahariya and Farafra Oases, was also extensively occupied. Since 1978 the Canadian Dakhleh Oasis Project (DOP), directed by Anthony Mills, has been conducting yearly archaeological investigations there of hundreds of sites, from clusters of Lower Paleolithic stone tools to medieval Islamic structures. Nearly 250 sites dating to the Roman Period have been located, including three large towns, farmhouses, more than 20 temples, industrial sites – and of course rock-cut tombs and cemeteries. A number of these sites have been very well preserved by sand dunes, which covered the structures and preserved their abandoned organic (and inorganic) artifacts. In Roman times the oasis was exploited for its agricultural wealth, and it is likely that as the sand dunes encroached upon human settlements the site was abandoned because of decreasing agricultural yields.

In 1986 the DOP began excavations at the large town site of Ismant el-Kharab (Kellis in Greek), under the direction of Colin Hope (Monash University, Melbourne). In the eastern part of the oasis, Kellis was the cult center of the god Tutu, the son of the goddess Neith – and “Master of Demons.” The temple was built of stone, with shrines (including a *mammisi*) and storerooms of mud-brick. Sandstone altars are still standing in the temple’s forecourt. In two of the shrines were well-preserved wall paintings, and recent conservation of the paintings in the *mammisi* (Shrine I) under the direction of Olaf Kaper (Leiden University) has revealed that different parts of this shrine were painted in two different styles: pharaonic and Roman.

In the central part of the town are a number of mud-brick houses with courtyards that were built in blocks, many of which have been preserved up to their roofs.

Rectangular rooms were barrel-vaulted, and on the interior walls there were niches, shelves, and cupboards (without wooden doors, which had been removed). Four houses which have been excavated can be dated to the late 3rd to late 4th centuries AD, based on dated coins, dates which appear in texts of contracts, and the types of ceramics excavated.

Recently at the northern end of the town (Area B) Hope has excavated a large, multi-roomed residence in which well-preserved wall paintings have been revealed, with two rooms containing fragments of plaster sculptures of human figures, one of which was a statue of the goddess Isis. These statues are in classical style as are the painted wall decorations, which include ceiling paintings in Room 1a of the deities Isis-Demeter and Serapis-Helios (Figure 10.4).

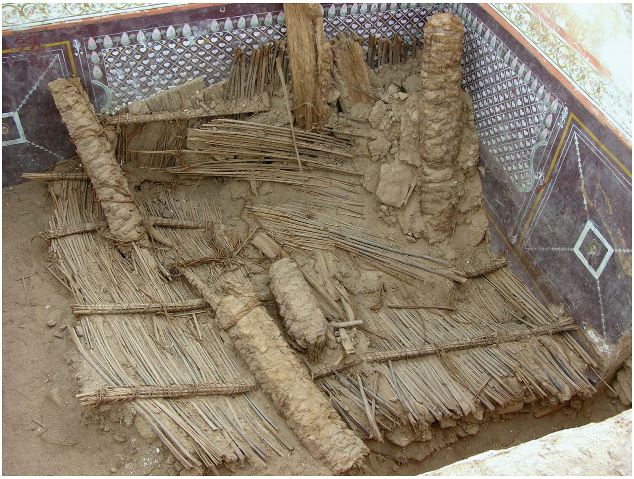


Figure 10.4 View inside a 2nd-century elite house (Structure B/3/1, Room 7) showing the collapsed roof, at the Dakhla Oasis site of Ismant el-Kharab (ancient Kellis).

Source: © C.A. Hope.

Kellis was the center of the regional economy, which was based on the local agriculture, and there is evidence of a wide range of transactions that took place there. In House 3, 206 coins were excavated along with an enormous quantity of texts: two intact wooden codices (books), 44 inscribed wooden boards, and ca. 3,000 fragments of papyri. One of the codices is a detailed four-year record of a farmer's accounts. The accounts are of commodities received, including barley, wheat, fodder, sesame, wine, and pigs. Some of the recorded commodities were not produced in Egypt in Dynastic times, including cotton, olive oil, and chicken.

Texts from the excavated Kellis houses are in Greek, Coptic, and Syriac, a dialect of Aramaic that was written in Syria/northern Mesopotamia (and was the language used in a large corpus of texts of Eastern Christianity). The Kellis texts provide information about the local economy, including documents about loans, and business and legal affairs. Religious texts also point to the existence of two different (and contemporaneous) religious communities at Kellis – a Christian one and that of an eastern religion, Manichaeism. Evidence of the early Christian community is also provided by two excavated churches (the "East Churches"). The larger one, a two-aisled basilica, is preserved to a height of almost 4 meters and has artifacts which date to the early 4th century.

Several cemetery areas are also associated with Kellis, including vaulted mausolea of one or more chambers. A cemetery to the northwest of the town in an area of low hills contained multiple burials in single-chambered tombs, which date to the 1st–2nd centuries. A few of these burials were covered with painted and gilded cartonnage cases similar to contemporaneous ones from Bahariya Oasis.

Another Roman Period cemetery in the western part of Dakhla Oasis, at el-Muzzawaqa, contains hundreds of tombs which were excavated into three hills. The double-chambered tomb of Petosiris, which dates to the early 2nd century, is decorated with remarkably well-preserved paintings. Scenes in the inner chamber include a Greco-Egyptian zodiac, the weighing of the heart before Osiris, and the goddess Isis giving a libation to the deceased's *ba*. In the outer chamber Petosiris is depicted wearing a pink Roman toga, next to which is a vertical hieroglyphic inscription with exhortations to his *ba*.

Also in Dakhla Oasis, excavations have been conducted since 2004 at the site of Amheida (the ancient town of Trimithis) by an expedition now from New York University under the direction of Roger Bagnall. Located in the northwestern part of the oasis, Amheida has ceramic evidence dating from the Old Kingdom onward, but in the Roman Period it became an urban center with surrounding agricultural settlements producing olive oil, wine, dates, and figs. Excavations include an elite house of the 4th century with wall paintings, which has been recreated for visitors near the site entrance. Although the temple to the god Thoth on the "temple hill" dates to the 1st century, reused blocks from the Third Intermediate Period and Late Period have also been found there. Architectural conservation has also been part of the project, including the consolidation and rebuilding of a 1st-century mud-brick pyramid monument in a cemetery area that is located to the south and east of the town.

The remarkably well-preserved finds, of mummies from Bahariya Oasis, and towns, texts and cemeteries from Dakhla Oasis, demonstrate the rich archaeological evidence still to be unearthed in Greco-Roman sites in the Western Desert.

10.7 The Eastern Desert: Roman Ports, Forts, Roads, and Quarrying Sites

In Roman times highly desirable trade goods from the East were shipped from southern India and Sri Lanka to Rome via Egypt. One reason that this trade was conducted by sea was to circumvent the overland Silk Route, the western end of which was controlled first by the Parthian kingdom and later by the Sassanian kingdom (which extended from what is now Iraq to the Indus Valley, the Hindu Kush Mountains and beyond). South Arabia and coastal Africa south of the Horn were also included in this trade network. The trade was of highly profitable luxury goods – including pearls, silk, exotic spices (especially pepper), incense, and medicinal plants. Large fleets of trading ships were financed by private merchants, with the Roman government benefiting from the high taxes collected on these imports (up to 50 percent).

Although the sea route would seem to be easier for the large-scale transport of these goods than the overland one from China and South Asia, large ships (up to 60 meters long) of some complexity to build and sail were needed to cross the Indian Ocean. Even with Roman shipbuilding technology, such voyages across the open sea were risky, as was shipping through the Red Sea, and pirates were also a big threat. In order to avoid the northerly winds on the Red Sea for much of the year and dangerous coral reefs, the eastern trade goods were unloaded at Roman ports in Egypt on the Red Sea, and then transported overland to the Nile Valley. As the terminus of this trade through Egypt, Alexandria greatly benefited economically, and from there the goods were shipped across the Mediterranean to Rome.

The Periplus of the Erythrean Sea, written by an unknown author in the 1st century AD, is the most important text about this trade, including information about ports, routes, and items of trade – as well as often curious information about indigenous peoples and rulers of the visited regions. Two Egyptian sea ports are mentioned in the *Periplus*, Myos Hormos (now thought to be the site of Quseir el-Qadim), and Berenike in the south, which was first located in the early 19th century by the Italian adventurer Giovanni Belzoni. Other classical sources list several more Roman ports on the Red Sea, of uncertain location.

Unlike the evidence of the Middle Kingdom port on the Red Sea at Mersa/Wadi Gawasis, where there were camps but no permanent settlement (see Box 7-A), the Roman Period ports there were permanently occupied towns. A major problem for pharaonic settlement along the Red Sea was a lack of fresh water, and even today fresh water is brought to towns along the Red Sea via a pipeline from the Nile. So the Roman ports on the Red Sea, which provided part of the structure for the overseas trade network with the East, could only have operated by solving the water-supply problem by digging deep wells in the desert wadis of the inland routes and bringing that water by some means to the ports. In addition, agriculture was not possible at these Red Sea ports. Although fishing and hunting desert fauna were possible, and small herds of cattle, sheep, and goats could be kept, it would have been necessary to bring many food supplies from the Nile Valley.

The port of Quseir el-Qadim was excavated 1978–1982, under the direction of Donald Whitcomb and Janet Johnson (Oriental Institute, University of Chicago), and more recently by David Peacock (University of Southampton). Quseir was first used in Roman times (1st–2nd centuries AD), and later in the Islamic period (13th–14th centuries), with a huge gap in occupation between these two phases. Texts on Roman Period artifacts excavated at Quseir are in Latin, Greek, Demotic (Egyptian), South Arabian, and Tamil (in Brahmi script, written in southern India).

Nabataean inscriptions have also been found carved on rock along a desert caravan route leading from Quseir. The Nabataean kingdom arose in the later first millennium BC, with its capital at Petra (in present-day southwestern Jordan), which was a center for the caravan routes bringing exotic trade goods, especially frankincense and myrrh from southern Arabia, to the eastern Mediterranean region.

In its initial plan, Quseir was a Roman town, with blocks of buildings aligned along a *cardo*, the main north–south street. Commercial structures excavated by the Oriental Institute expedition include a large warehouse of the same type as built in Rome's own port of Ostia, and a row of shops aligned along a street. There was also a fort (*castellum*), and a large lagoon formed the harbor.

Berenike was the southernmost Roman port in Egypt (about 260 kilometers east of Aswan), and, according to the *Periplus*, from there ships sailed to Adulis in the southern Red Sea, the port of the Aksumite state, which was located mainly in highland Ethiopia/ Eritrea. Beginning in the 1990s, a joint University of Delaware/ Leiden University expedition excavated at Berenike, under the direction of Steven Sidebotham and Willeke Wendrich. Recent excavations there have been conducted by a joint expedition of the University of Delaware and the Polish Centre of Mediterranean Archaeology, Alexandria. Remains of the early town are Ptolemaic, lying beneath an enormous dump to the north of the Roman site. Port structures of the Roman Period include administrative and customs buildings, and warehouses. One warehouse room still contained a number of amphoras which date to ca. AD 400 – and an ostraca with a garbled South Arabian/

Ethiopic script, two scripts (and languages) written by the Aksumites. There was also a temple of Serapis on a hill on the town's west side.

Different Indian and Persian Gulf wares have been excavated at Berenike, and Roman pottery from all over the Mediterranean – from Spain to Syria-Palestine – has been identified. Well-preserved organic remains, including over 1,200 peppercorns, coconut shells, rice, Indian resist-dyed textiles, and teak wood, as well as beads from regions in southeast Asia, attest to wide-ranging trade connections with the East via ports of trade in southern India. But incised black and red Nubian-like pottery also suggest the presence of Blemmyes, nomadic peoples known from textual sources from the late first millennium BC onward, whose hostile presence in the Eastern and Western Deserts eventually led to the abandonment of many Roman Period sites there.

In the northern part of the Red Sea coast a late Roman fort was built at Abu Sha'ar, which has also been excavated by Steven Sidebotham (Figure 10.5). The fort was built in the early 4th century to defend the Roman frontier. The fort's walls, which were 1.5 meters thick and up to 4 meters high, were made of local materials – cobbles from the Gebel Abu Shar'er (ca. 5.5–6.0 kilometers to the west) and mud mortar. The fort has a rectangular plan (ca. 77.5 × 64 meters), with 12–13 towers made of blocks of gypsum in the four walls. Within the fort rectangular structures were laid out in blocks. These included storerooms, guard rooms, 54 barracks and other living quarters, and a kitchen with a large circular oven and food preparation and storage areas. The *principia* (headquarters) in the central part of the fort on the east side faced a columned street leading to the main west gate. By the early 5th century the fort was occupied by Christian monks or hermits, and the *principia* was converted into a church.

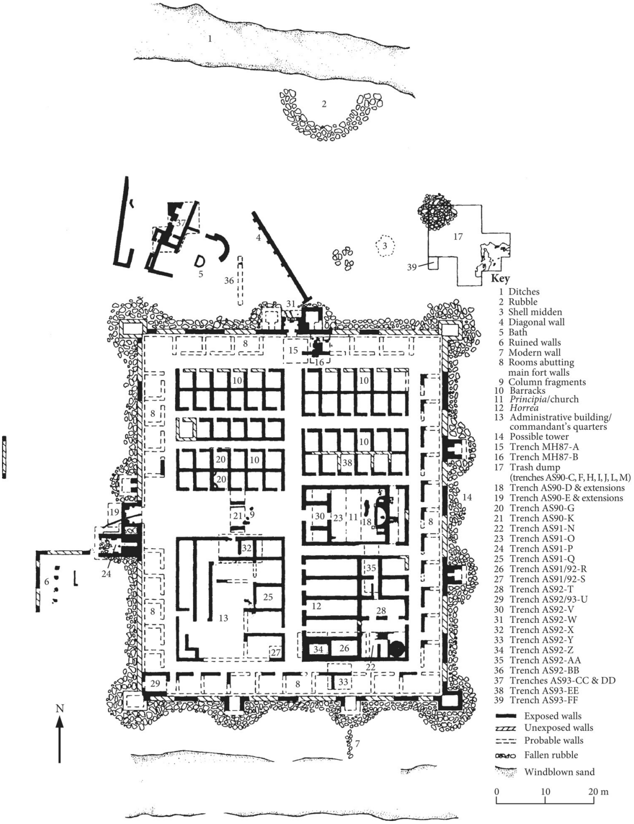

N
Key
1 Ditches
2 Rubble
3 Shell midden
4 Diagonal wall
5 Bath
6 Ruined walls
7 Modern wall
8 Rooms abutting main fort walls
9 Column fragments
10 Barracks
11 *Principia*/church
12 *Horrea*
13 Administrative building/ commandant's quarters
14 Possible tower
15 Trench MH87-A
16 Trench MH87-B
17 Trash dump (trenches AS90-C, F, H, I, J, L, M)
18 Trench AS90-D & extensions
19 Trench AS90-E & extensions
20 Trench AS90-G
21 Trench AS90-K
22 Trench AS91-N
23 Trench AS91-O
24 Trench AS91-P
25 Trench AS91-Q
26 Trench AS91/92-R
27 Trench AS91/92-S
28 Trench AS92-T
29 Trench AS92/93-U
30 Trench AS92-V
31 Trench AS92-W
32 Trench AS92-X
33 Trench AS92-Y
34 Trench AS92-Z
35 Trench AS92-AA
36 Trench AS92-BB
37 Trenches AS93-CC & DD
38 Trench AS93-EE
39 Trench AS93-FF
Exposed walls
Unexposed walls
Probable walls
Fallen rubble
Windblown sand
0
10
20 m

Figure 10.5 Plan of the fort at Abu Sha'ar as it appeared following the 1993 excavations.

> Source: K. A. Bard (ed.), *The Encyclopedia of the Archaeology of Ancient Egypt*. London: Routledge, 1999, p. 85. Reproduced by permission of Taylor & Francis Books UK.

The Roman Red Sea ports could not have existed without well-established routes from the Nile Valley through the Eastern Desert. These were not paved roads, but tracks through Eastern Desert wadis that were the easiest routes across arid mountainous regions. Wells were dug in these wadis, and way-stations and fortified wells (*hydreumata*) were located at regular intervals. Cairns and signal towers were also erected to guide the caravans along the major routes. The roads not only connected the river and sea ports, but some also led to mining and quarrying sites.

Built during the reign of the emperor Hadrian, the Via Hadriana began in Middle Egypt at Antinoöpolis, headed eastward through the desert and then turned south along the sea toward Abu Shar'er, continuing all the way south to Berenike. A road also led southwest from Berenike to the Wadi Kalalat, where there were both small forts and a very large one with a huge well (possibly the source of Berenike's fresh water), but this route did not continue to Aswan. Berenike was connected to Edfu via a desert route used in Ptolemaic times, but later the more frequently used route from Berenike was to Coptos. The desert road from Quseir/ Myos Hormos also led to Coptos. Abu Shar'er was also linked to the Nile Valley by a desert road leading to Qena/Kainopolis, where there was a Roman emporium. This road was also the transport route into the Nile Valley for quarried stone from Mons Claudianus and Mons Porphyrites.

Located in the Eastern Desert mountains about 70 kilometers northwest of modern Hurghada, Mons Porphyrites (Gebel Dokhan) was excavated in the 1990s by David Peacock and Valerie Maxfield. Because of the site's isolated location the excavators experienced many logistical difficulties – as there certainly were in Roman times. For the same reason the site has also been well preserved – until recent forays by tourists from resorts at Hurghada on the Red Sea.

Two main areas at Mons Porphyrites were occupied: a fort (*castellum*) in the central part of the quarrying sites, on a ridge above Wadi Abu Ma'amel, and another fort to the south known as Badia. Inscriptions on ostraca excavated at Mons Claudianus, about 50 kilometers to the south, indicate that Mons Porphyrites was the administrative center for the region's military and quarrying activities. Two main wells in Wadi Abu Ma'amel supplied fresh water to the Mons Porphyrites workers, but all food and supplies would have had to be brought in from the Nile Valley. Because of the rugged terrain – the porphyry was quarried on mountaintops at 1,200 to 1,600 meters above sea level – workers' huts were located close to the several quarry sites. Thus water, food, supplies, and tools would also have had to be carried to the workers' huts.

In the 1960s a German team visited Mons Porphyrites briefly, recording the Temple of "Zeus Helios Great Serapis," and plans of workers' villages. There was also a smaller Temple of Isis at the site: both temples were located near the *castellum*. Later the British expedition found a small temple high in the mountains with an inscription dedicating it to the god Pan-Min. This inscription also dates the discovery of the site – on July 23, AD 18 by Caius Cominius Leugas (a Roman "geologist"). The British excavations at Mons Porphyrites have yielded over 9,000 inscribed ostraca, which provide important information about operations there.

Purple was the imperial color, and this may have been a significant factor in the quarrying of porphyry at Mons Porphyrites under the Roman emperors. Purple porphyry was quarried for use in the most important Roman architecture (columns, wall veneers, and floors for palaces and temples). It was also used for sculpture and sarcophagi – and was fashioned into large basins (bathtubs!). From the quarries the huge stone blocks had to be guided down constructed mountainside slipways, which were lined with cairns to mark the way (the longest of these is 2 kilometers). There were loading ramps at the ends of the slipways, and then the stone was dragged 16 kilometers (on sledges or rollers) through two wadis to the great loading ramp. From this point the porphyry was loaded onto carts pulled by draft animals and transported to Badia – and then taken ca. 150 kilometers across the desert to Qena. Given the logistics of sustaining the quarry workers and soldiers, maintaining the forts, and getting the stone, which appealed to the tastes of Roman emperors and elites, from the Eastern Desert to Rome, the Mons Porphyrites operations represent a quite extraordinary undertaking.

Throughout pharaonic times the Eastern Desert was exploited for its gold-bearing veins of quartz, and this continued in Roman times. Near the site of Bir Umm Fawakhir, along the Wadi Hammamat route between Qena and Quseir, the Romans built wells and a signal tower, and there is also evidence of earlier pottery at mine sites to the southeast. But the more than 200 houses and outbuildings, made of rough granite cobbles, are of the Byzantine Period, dating to the 5th and 6th centuries, when possibly more than 1,000 people lived in this town. The site has been excavated by Carol Meyer (Oriental Institute, University of Chicago), and the evidence there of gold mining includes stone tools to crush and grind the quarried quartz.

Nubia

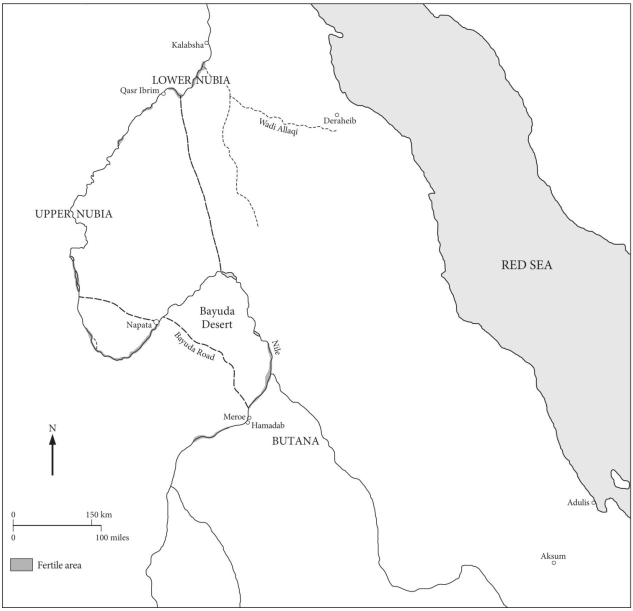
10.8 Qasr Ibrim

Qasr Ibrim is an ancient site in Lower Nubia with evidence of occupation or use from the 18th Dynasty to the 19th century AD. Located on a high stone outcrop on the east bank of the Nile, the site is the only large ancient settlement in Lower Nubia that was not covered by the waters of Lake Nasser after the construction of the Aswan High Dam. Organic remains from all periods have been incredibly well preserved; however, since the late 1990s much more of the site has become waterlogged because of high lake levels.

Beginning in the 1960s Qasr Ibrim was investigated as part of the Nubian Salvage Campaign, including cemetery areas which are now submerged. The more recent excavations (and conservation) there have been conducted by the Egypt Exploration Society.

The earliest fortifications at Qasr Ibrim, which date to the early first millennium BC (based on radiocarbon dates), are of mud-brick with an inner core of stones. According to Mark Horton (University of Bristol), this evidence demonstrates that Lower Nubia was not completely abandoned after the New Kingdom, as has been commonly believed. Within these walls, a mud-brick temple was later built by the 25th-Dynasty king Taharqo, whose cartouche has been found on one of the temple's column drums.

After the 25th Dynasty, monuments and fortifications continued to be built at Qasr Ibrim. In 23 BC the Romans battled for the site during their military campaign against the Meroites, and archaeological survey has located two Roman siege camps on a nearby plateau. Although Roman occupation of Qasr Ibrim was brief (perhaps two years), they built a podium and a temple, which is similar to the temple farther downstream at Kalabsha (ancient Talmis). The Kalabsha temple, which is the largest free-standing temple in Egyptian Nubia, was built during the reign of Augustus, over a dismantled late Ptolemaic temple, and was dedicated to the Nubian god Horus-Mandulis, as well as Isis and Osiris. Like the temple complex at Philae, it was dismantled in the 1960s and was then re-erected on higher ground near the High Dam.


Kalabsha
LOWER NUBIA
Qasr Ibrim
Deraheib
Wadi Allaqi
UPPER NUBIA
RED SEA
Bayuda
Desert
Napata
Bayuda Road
Nile
Meroe
Hamadab
BUTANA
N
0
150 km
0
100 miles
Fertile area
Adulis
Aksum

Map 10.2 Sites in Nubia and Ethiopia/Eritrea contemporary with the Greco-Roman Period in Egypt.

Primis is one of the names for Qasr Ibrim known from classical texts. After a treaty was concluded with Rome, locating the Roman border farther north, the site reverted back to the Meroites. A number of abandoned articles have been excavated at Qasr Ibrim attesting to the Romans' departure, including military artifacts (thousands of stone catapult balls), papyri, clothes, sandals, lamps, coins, and imported Roman pottery (amphoras and a molded ware called *terra sigillata*). Qasr Ibrim became an important Meroitic administrative and cult center, and in post-Meroitic (X-Group) times pagan religion continued to be practiced there by Nubians, after this was no longer possible in Egypt. One Ibrim temple dates to ca. 400, and pilgrims continued to visit the site, carving their footprints on paving stones and inscribing their names (in Greek and less frequently in Meroitic). But there is also evidence at Qasr Ibrim of the introduction and gradual acceptance of Christianity in Nubia in the mid- to late 6th century. The Taharqo temple was converted into a church and around AD 600 Meroitic temples were disassembled to build the Cathedral, with Ibrim as the seat of a bishop.

10.9 Meroe: The Kushite Capital and Royal Cemeteries

Although scholars disagree about when Meroe became the royal seat of the Kushite kingdom, from ca. 300 BC onward royal pyramids for kings were built to the east of the city. In the north Napata continued to be an important ceremonial and cult center, but Meroe, which is located on the Upper Nile between the Fifth and Sixth Cataracts, was the capital.

Meroe is in the northernmost region of Sudan which receives annual summer rains, and sorghum was probably the most important cereal crop, with barley also grown farther north. But even in areas of the Upper Nile with large flood basins, Meroitic agriculture could not produce huge surpluses as in Egypt, and, according to David Edwards's studies, the water wheel (*saqia*) was not introduced into Upper Nubia until early Christian times. To the east of Meroe, the Butana provided extensive grasslands for herding (probably mostly cattle), and the Meroitic state built large water reservoirs (*hafir*s) at their cult centers in the western Butana.

Meroe is located across the river from the end of the track/road that crosses the Bayuda Desert, a route from Napata that is a much shorter distance than following the Nile around the bend at Abu Hamed. Meroe benefited from long-distance trade (and also probably royal gift-giving/exchange) first with Ptolemaic Egypt, and later with Roman Egypt after conflict with the invading Romans was resolved by a treaty. Exports from the Meroitic kingdom included gold, ivory, and ebony – and probably slaves. Luxury imported craft goods from the Roman world (via Alexandria or produced there) have been found in royal and high-status Meroitic graves: glass; jewelry; Egyptian faience; silver vessels; vessels, lamps, and statues in bronze; wooden containers (such as boxes and pots for eye paint); *terra sigillata* pottery; and amphoras (which contained wine or olive oil). Such imported prestige goods were probably given to high-status persons through a royal reward system.

Gold jewelry for Meroitic royalty, and decorative pieces and amulets in faience were also manufactured in workshops at Meroe. The city was an important iron-producing center, and large slag heaps have been found there. A fine wheel-made pottery was also made by Meroitic potters, but nothing is known about production centers for this pottery. The ware was often decorated with beautiful floral/leaf designs (of classical inspiration), as well as other symbolic/religious motifs. In the later 1st century BC the ceramic tradition became even more refined with the appearance of a new marl ware with "egg-shell" thin walls. Some of these wares were widely distributed throughout the Meroitic kingdom.

Meroe was a state with complex economic – and, consequently, administrative – activities. Perhaps as a response, one important innovation occurred: texts were written in the Meroitic language, and not in Egyptian, as during Napatan times. The many ostraca that have been found with Meroitic inscriptions indicate considerable literacy. Two scripts were used to write the Meroitic language: cursive and hieroglyphs. The Meroitic "alphabet" used 23 cursive signs taken from Egyptian demotic and their corresponding hieroglyphic signs, which were used on monuments. Although the phonetic values of these signs are known, because they were derived from Egyptian, the language has only been recently identified by French scholar Claude Rilly as a northern branch of the Eastern Sudanic group, and texts remain only partly deciphered.

In the early 20th century excavations at Meroe were conducted by John Garstang (University of Liverpool), who worked in both the city and cemeteries (Figure 10.6). After World War I George Reisner excavated the three royal cemeteries, which were later published by Dows Dunham. Peter Shinnie (University of Calgary) began major excavations at Meroe in 1965, in association with the University of Khartoum. From the 1950s onward Friedrich Hinkel (in later years Corresponding Member of the German Archaeological Institute, Cairo) conducted systematic studies of the Meroe pyramids (and rulers buried in them), which included preservation, restoration, and recording the architectural plans, reliefs, and inscriptions. Although Shinnie's excavations on the North Mound at Meroe revealed an early village, excavations have mostly concentrated on the city's temples and monumental architecture, and the royal tombs to the east. Much of the rest of the ancient city remains unexcavated.

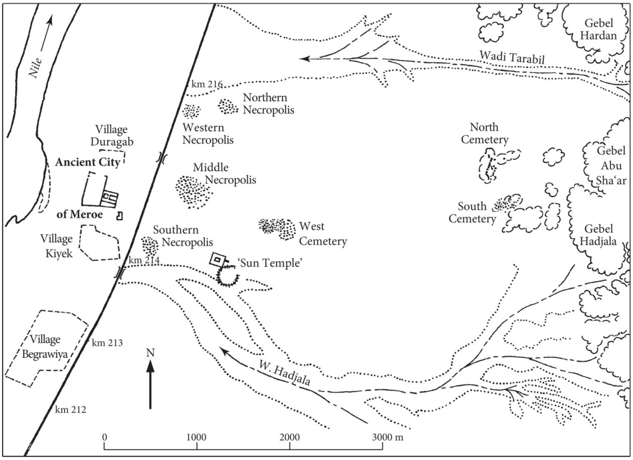

Nile
Gebel Hardan
Wadi Tarabil
km 216
Northern Necropolis
Western Necropolis
Village Duragab
Ancient City
of Meroe
Middle Necropolis
North Cemetery
Gebel Abu Sha‘ar
South Cemetery
Gebel Hadjala
Village Kiyek
Southern Necropolis
West Cemetery
km 214
‘Sun Temple’
Village Begrawiya
km 213
N
W. Hadjala
km 212
0
1000
2000
3000 m

Figure 10.6 Meroe, plan of the city and cemeteries.

Source: K. A. Bard (ed.), *The Encyclopedia of the Archaeology of Ancient Egypt*. London: Routledge, 1999, p. 506. Reproduced by permission of Taylor & Francis Books UK.

The most recent excavations at Meroe by a joint expedition of the University of Khartoum and the Royal Ontario Museum (Toronto, Canada) have uncovered the remains of a palace or administrative center with radiocarbon dates of ca. 900 BC, in strata beneath a later royal palace. The earliest remains excavated by Shinnie at Meroe also date to the 10th century BC. They consist of a circular timber house, above which are mud-brick houses from a later occupation. Inscriptions on stones from an early Amen temple, which was probably associated with a palace complex, date to the 7th century BC. At the time the temple may have been on an island separated from the rest of the town by a channel in the Nile. In the 3rd century BC a huge trapezoidal wall, 5 meters thick and ca. 400 × 200 meters, was built to enclose the temple-palace complex, the so-called Royal City. Subsequently, a new Amen temple (Temple 260) was built to the east of the royal enclosure.

Garstang’s early excavations in the Royal City were not up to the standards of Petrie’s or Reisner’s work, and there are many problems understanding his records of the architecture there. One of the more striking artifacts which Garstang found in the northern part of the royal enclosure, beneath the threshold of a chapel, is a bronze head of the Roman emperor Augustus. The head was taken by the Meroites during their conflicts with the Romans.

In the later 3rd century BC an unusual new temple (195), which Garstang called the "Royal Baths," was built in the western part of the royal enclosure. A large pool (almost 3 meters deep) in the temple filled with water during the annual flooding, and László Török (Institute of Archaeology, Hungarian Academy of Sciences) has suggested that it was a "Water Sanctuary," associated with rituals of the New Year, which began at this time. Considerably north of the royal enclosure (ca. 300 meters), Temple 600 was built in the later 2nd century BC. This temple was for the cult of Isis, and it attests to the importance of this deity as far south as Meroe. Although the Water Sanctuary was rebuilt in the 1st century BC, when associated statues of the Meroitic lion-god Apedemak suggest the rising importance of this cult, the temple was finally abandoned in the next century.

A considerable program of temple building took place at Meroe in the 1st century AD, perhaps brought about by prosperity following the end of conflict with the Romans. New pylons were added to the Amen temple, and a set of smaller temples were built to the east of the main temple along a sacred way. To the southeast of the Amen temple a new palace (750) and storeroom complex (740) were also built. Thus the new core area of the city shifted to the east of the earlier royal enclosure.

About 1 kilometer to the east of the city a new temple (250), which Garstang incorrectly identified as the "Sun Temple" mentioned by Herodotus, was investigated in 1984–1985 by Friedrich Hinkel. According to Hinkel, Meroitic royal cartouches, archaeological evidence, and the iconography of reliefs date this temple to the late 1st century BC/early 1st century AD. Built on a platform and entered by stairs, the temple's sanctuary is a one-room rectangular structure surrounded by a walled ambulatory. Outside the temple was a walled court, elevated about 2 meters and surrounded in the interior by 51 columns. The east wall of the court was designed as a pylon, which was entered via a ramp. On the exterior, the court walls were surrounded by 72 columns. A much larger mud-brick wall, which was faced with fired brick, surrounded the temple complex, with the main entrance on the east side. All of the walls were originally covered with reliefs, including a view of the completed temple on the court's west wall.

Aligned to the east along the temple's processional way was an altar with ramps (246), and a columned baldachin (245) enclosed on three sides by screen walls. An enormous water reservoir (*hafir*) was built to the southeast of the Sun Temple. A badly damaged adjacent square building (255) has sometimes been identified as a palace, although its use remains unknown.

Although the Sun Temple has some Egyptian-influenced elements in its architecture, its design, of a double elevated podium surrounded by columns on the interior and exterior of the walled court, is not that of a typical Egyptian temple, as the Kushites built at Napata. On the south side of the Sun Temple within the brick enclosure is a Roman style house structure (251–253, for the high priest?), with an interior atrium and peristyle of eight columns. According to Török, plans of earlier elite houses in the northern part of the royal enclosure at Meroe show parallels with Ptolemaic houses in Alexandria. Thus at Meroe there seems to have been emulation of classical architecture in some structures, which reflects both knowledge of and connections with the Greco-Roman world centered in the far north of Egypt at Alexandria.

Four non-royal cemeteries are located to the east of the city of Meroe: the Northern, Western, Middle, and Southern Necropoleis. These burials were covered with mounds, or rings of stone or gravel (the Middle Necropolis). A mortuary artifact that is frequently associated with (non-royal) Meroitic burials is the *ba*-bird statue, also known from Lower Nubia. The concept of the *ba* is Egyptian, but the Meroitic statues combine a standing human figure with bird wings in a new type of mortuary artifact. Rectangular stone offering tables with a projecting spout, the basic design of which was derived from Egypt, have also been found with Meroitic burials (Figure 10.7). In the center of the offering table there was a carved depression, around which were incised mortuary scenes of deities, with the offering formula and name of the deceased in cursive Meroitic script.

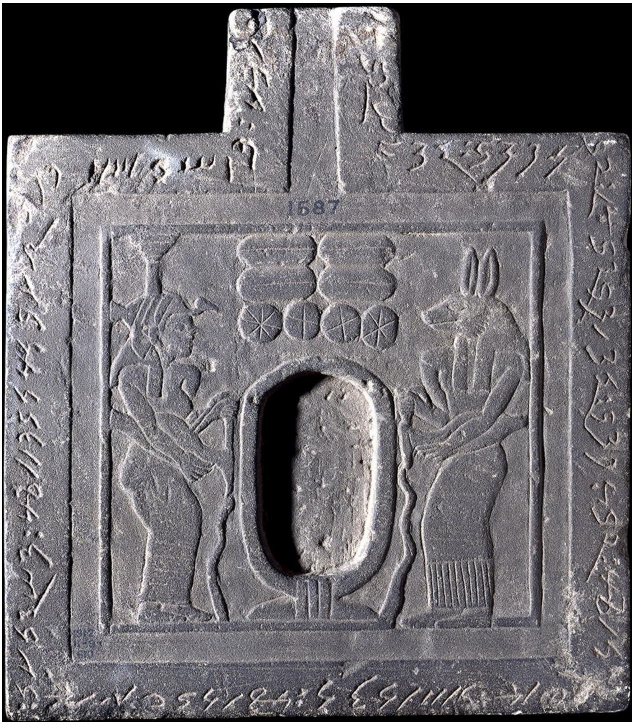


Figure 10.7 Meroitic offering table in sandstone of Qenabelile, with the scene of a goddess on the left and Anubis on the right pouring water on behalf of the deceased. Around the outside is a Meroitic inscription, but only the names of the owner and his parentage can be read.

Source: © The Trustees of the British Museum.

Like the earlier Kushite royal burials at el-Kurru and Nuri, the royal burials at Meroe were marked with pyramids: in the North, South, and West Cemeteries (abbreviated to Beg N, Beg S, and Beg W after the modern name of the site, Begrawiya). In his excavations of the Meroe pyramids (1921–1923), George Reisner established that the earliest royal cemetery was Beg S, used by the Meroitic branch of the royal family ca. 720–300 BC. This cemetery contained at least 90 tombs, 24 of which are pyramids, but only two of these belonged to early kings who ruled at Meroe. Beg N became the royal cemetery of Meroitic sovereigns, ca. 270 BC to AD 350–360, with 38 pyramids (and a total of 41 royal tombs). Beg W was the cemetery for members of the royal family, with 82 pyramids, 171 other tombs with superstructures, and many pit burials.

Although not as well constructed, the early royal pyramids at Meroe are similar in design to those at Nuri (Figure 10.8). The Meroe royal pyramids were steep-sided, with a core of sandstone rubble, filled with stone chips and soil, and encased in masonry blocks. An offering chapel was entered through a pylon on the east side (occasionally with an additional pylon and court). To the east of the pylon was a low wall, which sometimes enclosed the entire complex. Burial chambers were carved in the bedrock beneath the pyramid and entered by stairs. Later pyramids had only one roughly carved burial chamber. According to Hinkel's investigations, a ruler was buried in sealed underground chambers and then his successor built the pyramid over this tomb. The kings were usually buried with sacrificed servants and harem women. By ca. AD 100 the royal pyramids were being made less substantially with cores of brick and rubble.

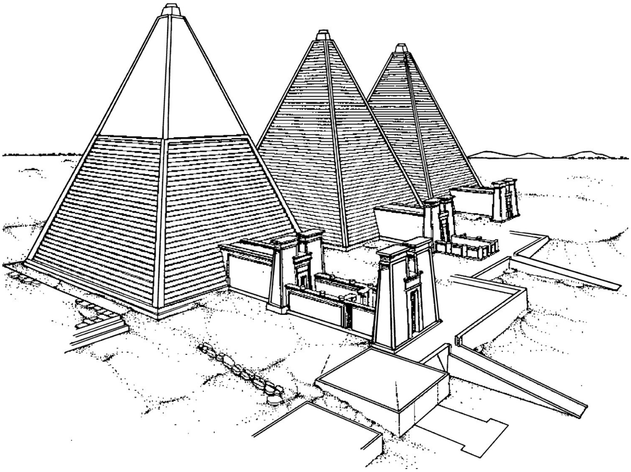


Figure 10.8 Reconstruction of several Meroe pyramids.

Source: Drawing by Friedrich W. Hinkel. K. A. Bard (ed.), The Encyclopedia of the Archaeology of Ancient Egypt. London: Routledge, 1999, p. 509.

Hinkel distinguished 14 different types of pyramids in the three royal cemeteries at Meroe, according to structure, shape, and decoration. The chapels were decorated with mortuary reliefs: the earliest ones have scenes of the king seated on a lion throne behind which is the goddess Isis. Later, members of the royal family are added, along with rows of courtiers and mourners, and scenes from the Book of the Dead. Even later scenes include the (Egyptian) deities Anubis and Nephthys pouring libations of milk onto an offering table with bread, and the dead king giving an offering to Osiris, behind whom is Isis.

Although much more is known about the temples and cemeteries at Meroe than its domestic quarters, 3 kilometers upstream from Meroe at Domat el-Hamadab, where the Wadi el-Hawad enters the Nile Valley, a Meroitic Period town has been excavated by a German-Sudanese expedition beginning in 2001 (Figure 10.9). About 5 hectares in area, the densely inhabited walled town contained blocks of houses to the north and south of a wide street, which led to a small temple on the east side. The temple had been excavated in 1914 by Garstang, who found two monumental stelae there, of Queen Amanirenas and Prince Akinidad. To the south of the temple the recent excavations have identified a large square building, similar in plan to a Meroitic "palace," which may have been administrative in function. Probable grain storerooms were located along the northern wall of the town. Less dense habitation was also situated outside the town's southern wall with evidence of industrial areas to the east and south, for iron smelting and the production of ceramic, faïence and glass artifacts. A cemetery was located ca. 500 meters to the south of the extra-mural deposits.

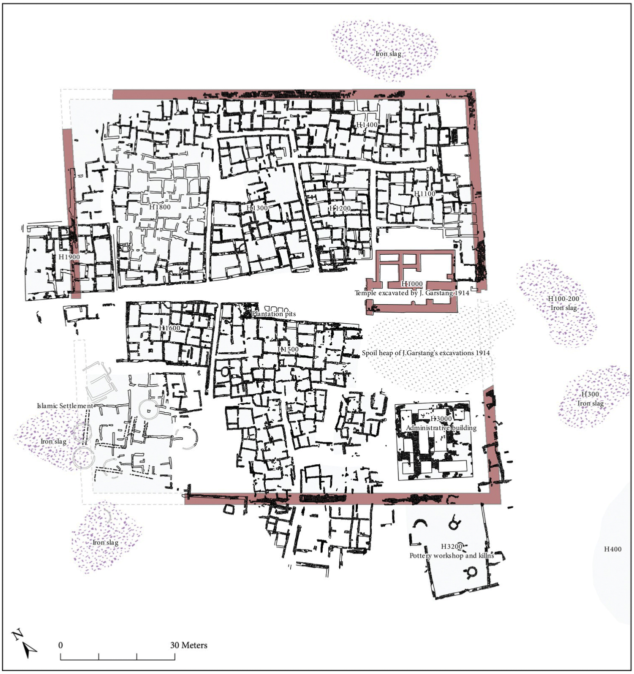

Iron slag
H1400
H1100
H1800
H1300
H1200
H1900
H1000
Temple excavated by J. Garstang 1914
H100-200
Iron slag
Plantation pits
H1600
H1500
Spoil heap of J.Garstang's excavations 1914
H300
Iron slag
Islamic Settlement
H3000
Administrative building
Iron slag
Iron slag
H3200
Pottery workshop and kilns
H400
N
0
30 Meters

Figure 10.9 Plan of the Meroitic town at Domat el-Hamadab.

Source: Pawel Wolf and Ulrike Nowotnick, "Hamadab, une zone urbaine méroïtique," *Dossier d'Archéologie* hors série no. 18: *Méroé, un empire sur le Nil aux confins de multiples cultures* (March 2010), p. 27.

Royal burials ceased at Meroe by ca. 360. Although the city continued to be occupied until ca. 400, the state and its kingship had already collapsed. If the origins of this kingdom can be pushed back to the 10th/9th centuries BC, then the Napatan-Meroitic state was a very long-lived kingdom. Although Egyptian cults in Roman Egypt continued to be important, Egypt was no longer ruled by a pharaoh who resided there. But at Meroe pharaonic traditions of kingship and royal mortuary practices continued (somewhat transformed with adapted Kushite elements), as did some pharaonic cults and beliefs – and the state never came under Roman domination.

After the collapse of the Meroitic state, Nubia was controlled by smaller polities, and large tumuli of post-Meroitic rulers have been excavated at several sites along the Middle Nile. These polities remained pagan and continued to worship ancient Egyptian (and Nubian) gods. But as Christianity descended across Egypt, it was only a matter of time before missionaries were sent to Nubia (later 6th century), with Christian kingdoms eventually forming there.

Chapter 11
The Study of Ancient Egypt

Egyptian civilization arose more than 5,000 years ago. It is one of the earliest civilizations – and one for which we have much information, not only of material remains but also of texts. Spanning over 3,000 years, ancient Egyptian civilization can be studied in terms of the processes of evolution and long-range development of an early civilization. Ancient Egypt can also be analyzed in comparative studies of early civilizations, such as Bruce Trigger's admirable work *Understanding Early Civilizations* (2003).

For prehistorians Egypt provides a rich body of evidence, beginning with its long sequence, from the Lower Paleolithic to the introduction and adoption of agriculture in the Neolithic. The Predynastic Period is studied both as the continuation of that sequence and as the rise of complex society and the origins of a pristine state.

Although settlement evidence is generally not well preserved, ancient Egypt was an urban society, and the processes of urbanization can also be studied there. It is not merely a coincidence that the largest city in Africa today, Cairo, is in the same region in northern Egypt as was the earliest capital of Memphis, founded some 5,000 years ago.

Ancient Egypt provides rich data on the socio-political and economic organization of an early state and on changes in this through three millennia. Pharaonic Egypt was a highly stratified society, as is apparent in both the textual and the archaeological evidence. It was the earliest large territorial state, and, unlike most early states, it was a stable one, in existence for over 800 years, from Dynasty 0 to the end of the Old Kingdom. Its political organization, with the strong institution of kingship, can be studied in different periods, from the earliest state to Egypt's empire in the New Kingdom, as well as later in the 1st millennium BC. Control of the New Kingdom empire was very different in southwest Asia than in Nubia, and different forms of colonialism can be examined.

Both the archaeological and the textual evidence provide information about different ethnic groups with whom the Egyptians came in contact and of whom members settled in Egypt, and how these groups interacted with Egyptians and reacted to Egyptian culture.

The agricultural system that developed in Neolithic and Predynastic Egypt, which later provided the economic base of the pharaonic state – with huge surpluses – can be studied in terms of the very successful adaptation of farming and eventually irrigation agriculture within the floodplain ecology of the lower Nile Valley. Destruction of the natural habitats of a number of wild animals and plants is not something that has happened only in modern times: this occurred in Egypt as farming spread throughout the Valley and Delta. Environmental studies are relevant for this ongoing process in Egypt – over the course of 7,000+ years. How the ancient Egyptians and the state responded (or did not respond) to environmental change, especially increasing aridity, is also a factor that should be of interest to ecologists and environmentalists today.

Warfare as a factor in socio-political change can be examined in the different periods of pharaonic history, especially in the New Kingdom when military campaigns in Nubia and Syria-Palestine played an important role in expanding and then maintaining Egypt's empire and were an important source of state and temple income. The technology, organization, and logistics of ancient warfare can all be studied from the Egyptian evidence, as can the ideology of the king as war leader.

For some ancient Egyptian technology, such as quarrying and mining, there is much information. Quarry sites are plentiful in the desert regions and the end products of stone quarrying are visible. But there is also representational evidence of stone masonry and other crafts as well as the finds of real tools used in these activities.

Although the wheel was known in Egypt as early as the third millennium BC, wheeled vehicles were not used to transport large stones until Roman times. Why some technology did not change throughout the Dynastic period should be of great interest to us in the modern world, where the pace of technological change is extraordinarily rapid.

From early times the Egyptians developed impressive boat-building technology and had knowledge of navigation. Paintings, reliefs, and models of boats exist, as well as real boats and parts of boats which have been excavated. There are also texts about seafaring expeditions. Long-distance trade and exchange are evident from Predynastic times onward, and in Dynastic times we know that state expeditions were conducted both overland and by sea. There is textual information about the organization and control of this trade and the wide-ranging foreign contacts that it represents.

Ancient Egypt was a literate society, and the invention of writing there was a very important development. Although the hieroglyphic writing system is one of great visual appeal, it may seem cumbersome to us who use the Latin/Roman alphabet today. But the ancient Egyptian writing system was a highly adaptive one that evolved though the millennia. In its latest form it was written using the Coptic alphabet, which is still in use.

Despite the problems posed by the limited range of texts that have survived and the biases in them, writing greatly expands our knowledge of this early civilization. The archaeological evidence cannot be understood alone. For archaeologists, texts are of great importance, for the (often specific) historical context in which evidence is excavated as well as for more culture-specific information.

From the ancient texts we have works of literature, and writing was used to record what could be termed history, law, natural history, science, and medicine. Ideology is in evidence not only in the temples, statues, and reliefs of the gods, but also in texts that illuminate ancient Egyptian beliefs, including the role of the king and the state in religion. The impressive royal monuments in Egypt provide evidence of the nature of Egyptian kingship and cult practices and beliefs, as do the texts that are found on these monuments. Texts also give insight into the processes of legitimization of Egyptian kingship, an institution which controlled vast resources, both human and material.

Ancient Egyptian religion, which has been a major focus of scholarly studies, changed over the course of more than three millennia and its long-term evolution can be studied in the architectural, archaeological, and textual evidence. But religion was also practiced by individuals outside the context of cult temples, in houses and chapels associated with villages such as at Amarna and Deir el-Medina. This personal evidence provides a contrast to the imposing monuments of state religion.

Throughout Egypt, from the Great Pyramid at Giza to the much simpler graves of workers, there is much evidence of the great importance of afterlife beliefs in this civilization. There is also a large body of mortuary texts spanning nearly three millennia which give very detailed information about the wide range of ancient Egyptian beliefs about the afterlife.

Ancient Egyptian mortuary beliefs required that human remains were preserved and protected in burials. Although most ancient burials have been robbed since antiquity for their grave goods, huge numbers of human remains have been excavated and curated over the course of the last 100+ years, providing much potential data for physical anthropologists who study ancient diseases and pathologies, nutrition and diet, and other information that may be preserved in human remains. Ancient cemeteries are still known in Egypt: for example, the cemetery associated with the town of Philadelphia in the Faiyum region, which spans the Greco-Roman Period into the Christian era and contains more than a million bodies, according to an estimate of the excavators (Brigham Young University). When excavated by modern techniques, these burials can enhance the data from earlier excavations of human remains.

The Giza pyramids, and now the excavated evidence of the pyramid town there, represent the great capability of the ancient Egyptian state to plan and complete complex state work projects on an enormous scale. Pharaonic Egypt became very skillful at the organization of its bureaucracy and the extraction of dues and taxes which supported the state.

Although it might be expected that the Giza pyramids were built by slave labor, which was common in the ancient world, we know from Egyptian texts that slavery did not develop in Egypt until the Middle Kingdom, and then only on a small scale. Social relations in this stratified society can be studied through both archaeological and textual evidence.

Egypt was a moneyless society until the later first millennium BC, but there is much information about the economy. The control of wealth and resources, and the economic base of the state, can be studied from archaeological and textual evidence. The role of elites, and control of resources by centralized versus local institutions (both provincial administration and cult temples), can be examined in the economy, as well as the relations of labor. Who controlled what, and how this operated – and changed through time – can all be investigated.

Egyptian civilization did not collapse with the end of periods of centralized control – or throughout the periods of foreign rule, of the Persians, Ptolemies, and Romans. The cults of the gods, mortuary beliefs, the idea of ancient Egyptian kingship, and what John Baines and Norman Yoffee have called "high culture" were fundamental in the continuity of this early civilization, and are worth examining in their cultural, historical, and ideological contexts as well as in comparative studies of early civilizations.

Roman Egypt, which was still pharaonic in much of its culture, was one of the regions where Christianity first spread. It is within this cultural context that the sects and communities of early Christianity in Egypt need to be understood, which may also provide insights into how the new religion developed in different forms in other parts of the Roman world.

Pharaonic Egypt has fascinated people of different cultures who have visited the country in ancient times as well as in recent centuries. Traveling exhibitions of Egyptian art, especially selections from Tutankhamen's tomb, attract huge crowds of viewers, and Egyptian collections in major museums in the West are very popular. The great beauty and distinctiveness of Egyptian art and the impressiveness of its monumental architecture are readily understood by people today, but how such works functioned in ancient Egyptian culture – and how they can be understood in this context – are issues that I have tried to address in this book. For those who simply want to be better informed about ancient Egypt, and not misled by speculation and the fantastical claims often made in movies and television about this early civilization, I hope that this book is useful.

Glossary of Terms

accretion layers

in some pyramids, layers of internal walls built to lean inward against a core construction.

akh

the transformation to a “glorified being” in the afterlife, after the deceased’s *ba* and *ka* are reunited through the burial ritual.

ba

sometimes translated as “soul,” but more the embodiment of the “personality” of the deceased, often depicted as a human-headed bird.

canopic containers/jars

vessels (in a set of four) used to store the viscera of the deceased after mummification.

cartonnage mummy case

a hardened case usually made by plastering cloth (but also papyrus).

cartouche

the oval design of a looped rope in which the name of the king or god is written in hieroglyphs.

corbel vault

to form a ceiling with stone beams or blocks, each course of the blocks is placed successively inward above the two walls up to the course which spans the top.

epigraphy

the study of (ancient) inscriptions.

false door

a niched design of a door in stone in the interior of a mastaba, through which the *ba* was to communicate with the deceased in the tomb and the outer world.

gebel

in Arabic, a mountain or rock/cliff formation.

geophysical prospecting/survey

in archaeology, using specially designed equipment, such as magnetometers and ground-penetrating radar, to locate subsurface archaeological remains.

glacis

in fortified structures (of the Middle Bronze Age), an earthen wall or ramp construction on the exterior of the fortifications.

hypostyle

an inner hall in a temple with many columns.

ka

often translated as "spirit": the life-force, an aspect of the living which separates from the body at death.

mastaba

Arabic for "bench"; the superstructure covering a subterranean tomb, often with a niche or room(s) for offerings, in the Early Dynastic Period and Old Kingdom. Multi-roomed mastabas of high-status persons of the later Old Kingdom were frequently covered with scenes in relief.

mortuary cult

located at the tomb, the perpetual cult for deceased individuals, where living persons (different kinds of priests and family members) made offerings and performed rituals which aided the afterlife of the deceased. Royal mortuary cults were located at the pyramid complex and later at the royal mortuary temple. From the Middle Kingdom onward, stelae or statues could be placed in temples or along processional routes for the benefit of an individual's mortuary cult. Secondary "offering chapels"/ cenotaphs were sometimes erected, such as the Middle Kingdom shrines at Abydos.

nome

a Greek term for an administrative district/province, which was headed by a nomarch.

obelisk

a tall four-sided monolithic monument tapering to a pyramid form at the top, which was placed outside temples.

offering formula

known as the *hetep di nesu* formula from the first three words of this inscription (in translation, "an offering which the king gives”). This text was inscribed on the walls of tombs and sometimes on statues and stelae. Since the non-royal deceased could not communicate directly with the gods, in this text the king gives an offering to a god (usually Osiris or Anubis) for the *ka* of the deceased. The offering consists of a number of commodities: (a thousand of) bread, beer, cattle, fowl, oil, and cloth.

Opening of the Mouth

a ceremony performed on mummies and statues (of gods, kings, and non-royal individuals), usually with an adze. Models of sets of implements used in this ceremony are also known (including two *netjerwy* blades and a *pesesh-kef* knife). The ritual symbolically enabled the mummy or the statue to have a (renewed) form of life, including breathing, eating, seeing, and hearing.

ostracon (pl. ostraca)

potsherds or stone chips used as a writing and/or drawing surface, often an inexpensive alternative to other writing media.

phyle

a Greek term used for the rotating system of part-time service, especially of the priesthood.

pious foundation

an endowment (of agricultural estates and other sources of income) for the perpetual support of temple cults or the mortuary cults of kings and private individuals.

portcullis

a large block of stone placed before the entrance to a tomb or burial chamber to thwart tomb robbers.

pot mark

sign(s) inscribed or painted on a pot.

pylon

a type of large monumental gateway which fronts the first courtyard of a temple or tomb complex, known from the Middle Kingdom and later.

remote sensing

in archaeology, the use of satellite images and aerial photographs to study sites and their geological settings. On-ground remote sensing is also called geophysical prospecting (see above).

***saff* tomb**

in Arabic, "row"; a type of royal tomb in western Thebes from the 11th Dynasty (pre-unification), with a number of subsidiary burial chambers carved in a row along a courtyard.

sealing

mud/clay used to cover and seal a container (especially jars), or storeroom doors, often with the rolled or stamped impression of the royal cartouche or *serekh*, or the seal of officials.

***sed*-festival (*heb-sed*)**

the royal jubilee, celebrated in the 30th year of a king's reign, and more frequently thereafter.

serdab

statue chamber/pit in a tomb.

serekh

the earliest format of the royal name, within a "palace façade" design, (usually) surmounted by the Horus falcon.

seriation

in archaeology, placing artifacts in a relative sequence from early to late.

shaduf

a water lift mechanism, using a bucket attached to one end of a weighted lever, introduced in Egypt in the early New Kingdom.

shawabti/shabti/ushebti

a figurine (in mummiform) placed in tombs, to serve the deceased in the afterlife (in manual labor) and act as his/her substitute.

stela (pl. stelae)

an upright slab of stone (sometimes wood), carved or painted with inscriptions and sometimes with scenes.

***tell*(also *kom*)**

in Arabic, a mound formed by the remains of settlements, often occupied over hundreds of years with many layers of occupation from different periods.

tumulus

a circular mound of stone, gravel, or other materials with a tomb either within this structure or below.

wadi

in Arabic, a dried-up river bed. In the deserts to the east and west of the Egyptian Nile Valley wadis are usually permanently dry, but often have some subsurface water. Desert wadis were often the routes that were used by ancient expeditions in these regions.

Suggested Readings

Chapter 1

For the most updated briefings on current excavations in Egypt, see "Digging Diary" in *Egyptian Archaeology, the Bulletin of the Egypt Exploration Society*, London, www.ees.ac.uk

For a comprehensive gateway to Egyptological research and excavations see "Egyptological Resources": www.newton.cam.ac.uk/Egypt

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Appendix 2: Websites

Websites for archaeological sites/projects discussed in this book

Abydos, Institute of Fine Arts at New York University:
www.nyu.edu/gsas/dept/fineart/academics/abydos/abydos.htm
www.abydos.org/blog/introducing-abydos/

Abydos, University of Michigan Middle Cemetery Project:
www.lsa.umich.edu/kelsey/fieldwork/currentfieldwork/abydosegypt

Abydos, Umm el-Qaab, Deutsches Archäologisches Institut:
www.dainst.org/en/project/abydos

Alexandria, Kom el-Dikka excavations (Polish Centre of Mediterranean Archaeology): www.pcma.uw.edu.pl

Amarna: www.amarnaproject.com/

Amheida, Dakhla Oasis:www.amheida.org

Buto, Deutsches Archäologisches Institut: www.dainst.org/en/project/buto?ft=all

Dakhleh Oasis Project: http://arts.monash.edu.au/archaeology/excavations/dakhleh/index.php

Dashur, Deutsches Archäologisches Institut: www.dainst.org/en/project/dahshur?ft=all

Dashur, North: www.waseda.jp/prj-egypt/sites/Dhshr-E.html

Edfu: http://telledfu.sites.uchicago.edu/

Elephantine, Deutsches Archäologisches Institut :www.dainst.org/en/project/elephantine?ft=all

El- Hibeh: http://neareastern.berkeley.edu/hibeh/index.htm

Fayum Project, UCLA: www.archbase.com/fayum/

project_2008.htm

Giza, Lehner excavations:www.aeraweb.org

Giza Archives Project:www.gizapyramids.org

Hierakonpolis: www.hierakonpolis-online.org/

Heliopolis: www.gko.uni-leipzig.de/aegyptologisches-institut/forschung/projekte/heliopolis.html

Institut français d'archéologie orientale/French Institute of Archaeology, Cairo (excavations at Balat/Ayn Asil, Ayn Soukna, Bahariya, Deir el-Medina, Dendera, Karnak-Nord, Karnak-sanctuaires, Sud-Sinaï, Taposiris Magna, Tebtynis, Tell el-Iswid): www.ifao.egnet.net

Kerma and Dokki/Dukki Gel: www.kerma.ch

Malkata: http://imalqata.wordpress.com/

Mersa/Wadi Gawasis: www.unior.it/ateneo/10847/1/contributi.html

Oxyrhynchus: www.papyrology.ox.ac.uk/POxy

Quseir el-Qadim: www.southampton.ac.uk/archaeology/research/projects/quseir_al_qadim_project.page

Saqqara (Dutch Expedition): www.saqqara.nl/excavations

Tell el-Dab'a: www.oeai.at/index.php/335.html

Tell el-Dab'a/Avaris: www.auaris.at

Tell el-Farkah: www.farkha.org/index.html

Theban Mapping Project and Tomb KV 5: www.thebanmappingproject.com

Thebes, Eastern, Karnak: http://dlib.etc.ucla.edu/projects/Karnak/

Thebes, Eastern, Mut Temple: www.jhu.edu/egypttoday/

Thebes, Western, El-Asasif: www.oeai.at/index.php/luxorasasif.html

Thebes, Western, Mission archéologique française de Thèbes-Ouest: www.mafto.fr

Thebes, Western, Dra ‘Abu el-Naga south (TT 11 and TT 12): www.excavacionegipto.com

Thebes, Western, Tomb KV 63: www.kv-63.com

Other useful websites

Digital Egypt for Universities (DEU): www.digitalegypt.ucl.ac.uk

Egypt Exploration Society: www.ees.ac.uk

Egyptian Ministry of Antiquities and Heritage: www.sca-egypt.org

Encyclopedia of Egyptology (University of California, Los Angeles): http://uee.ats.ucla.edu

Radiocarbon database, Egypt (subscription only): https://C14.arch.ox.ac.uk/egyptdb/db.php

Radiocarbon dating and the Egyptian historical chronology: http://c14.arch.ox.ac.uk/embed.php?File=egypt.html

Chapter Summaries and Discussion Questions

Chapter 1

Egyptian archaeology is the study of ancient Egypt and its prehistoric past, using archaeological evidence as the primary data. Egyptology, the study of ancient Egypt, is generally believed to begin with the founding of the French Institute in Cairo by Napoleon Bonaparte. While much of 19th-century Egyptology focused on the recovery of hieroglyphic texts and art, and the clearing and documentation of temples, tombs, and other monuments, serious archaeological methods came into use mainly in the 20th century. Most archaeologists now use many different scientific analyses in their investigations, while theoretical approaches vary greatly.

1. What are some of the characteristics of early Egyptian civilization?
2. How does the evidence and interpretation of prehistoric sites in Egypt differ from that of pharaonic sites?
3. What is Egyptology and what are its origins? Name some important Egyptologists and their contributions.
4. What are some of Petrie's important innovations in methods of fieldwork and analysis, and how were these methods useful for interpretation of his finds?
5. Many ancient Egyptian artifacts in museums have no known provenience. Why is context important to archaeologists who study ancient Egyptian artifacts?
6. How do the primary evidence and methods of history differ from archaeology? Can such different forms of evidence be integrated?
7. How does processual archaeology differ in theory from archaeology focused on culture history, and which theory is better, in your opinion, for the study of pharaonic sites?

8. What are some of the criticisms of processual archaeology, and what are some of its limitations in terms of investigations of pharaonic sites?
9. What are some of the specializations of scientists and other experts needed for field investigations, and what kinds of information do they contribute?
10. How can the conservation of archaeological sites differ from the excavation of these sites, and why is it important to do both?

Chapter 2

The ancient Egyptians spoke a language now called Egyptian, one of the major members of the Afro-Asiatic language family. Beginning ca. 3200 BC Egyptian was written in hieroglyphs and a cursive script known as hieratic. Changing over the course of the third and second millennia BC, the language is known as Old, Middle, or Late Egyptian. Demotic was a new cursive script and a form of the language from the first millennium BC. Coptic, the latest form of Egyptian, was spoken and written in Roman times and the Byzantine Period (2nd century AD onward).

Few people in ancient Egypt knew how to read and write, but professional scribes, who were trained in schools and through apprenticeship, were needed in all branches of government and administration. With hundreds of signs of several types used in the hieroglyphic and cursive systems, Egyptian was difficult to decipher. Jean-François Champollion is credited with pioneering its decipherment in 1822, with the aid of the Rosetta Stone, written in Egyptian hieroglyphs, demotic, and Greek.

The decipherment of Egyptian and subsequent advances in understanding the language made possible the translation of many different kinds of ancient texts. As a result, there is a wealth of textual information about ancient Egypt, which greatly expands what is known about the culture, including ideology. Historians have used texts of king lists and dated documents to calculate pharaonic chronology according to the regnal years of kings. Although there are problems in the analysis of king lists, texts can sometimes provide specific chronological information that would not be available otherwise.

1. What are some of the other languages and language groups in the Afro-Asiatic family?
2. What are the different scripts that were used to write Egyptian?
3. What are the different periods of written Egyptian, and what kinds of texts are known from these periods?
4. Describe the different types of signs used to write Egyptian. Why did the use of different types of signs make the decipherment of Egyptian so difficult?
5. Discuss the roles of different scholars in the decipherment of Egyptian and recovery of the language.
6. Why is it important to use textual evidence, when available, along with archaeological evidence to reconstruct the past?
7. What are some of the problems of using ancient Egyptian texts to interpret the past?
8. Describe the Egyptian calendars and how and why the ancient Egyptians reckoned time.
9. What kinds of texts have been used to calculate pharaonic chronology, and what are some of the problems inherent in these texts for establishing a chronology?

Chapter 3

Ancient Egypt was the land of the lower Nile Valley and Delta. Although the deserts to the east and west of the Nile Valley are very arid, the low lying basins of the Valley floodplain provided an almost ideal environment for the cultivation of emmer wheat and barley. Large-scale irrigation with canals was unnecessary and cereals were sowed after the annual flood receded. The basic staples of the ancient Egyptian diet were bread and beer, but many other plant and animal resources, both wild and domesticated, were also available in the Nile Valley. Clay and mud were in abundant supply, for pottery and building materials, as were stones for tools.

Many exotic raw materials for elite goods came from outside the Valley. A number of colored stones for beads, and galena and malachite for eye paint were found in the Eastern Desert. Other materials for elite and state consumption were imported from foreign lands, especially copper and turquoise from the Sinai, gold from mines in the Nubian Desert, and incense and other tropical products from the land of Punt, to the southeast of Nubia.

If Nile floods were adequate, all of the basic necessities of life were abundantly available in the Nile Valley. Agricultural surplus, which was controlled by the state, was the economic base of the pharaonic state. This surplus supported not only the government bureaucracy but also the production of the elite and royal art and architecture that are so characteristic of ancient Egypt.

1. Explain why Upper Egypt is located in the south and Lower Egypt is in the north.
2. What is the geographical extent of ancient Egypt?
3. Where does the Nile originate and how did its sources affect the seasonal pattern of flooding in ancient Egypt?
4. Why is the excavation of temples and tombs limited in the type of information it provides about ancient Egypt?
5. What are some of the environmental problems for archaeologists in the Nile Valley?
6. What is known about the agricultural system in ancient Egypt and how important was irrigation?
7. What foods supplemented the basic staples of the diet?
8. The basic necessities of human life are water, food, clothing, and housing (tools are also important for supplying and processing these necessities). Discuss the basic materials that sustained life for the ancient Egyptians.
9. What are some of the other resources available in the Nile Valley, and for what were they used?
10. Were imported materials necessary in ancient Egypt?

Chapter 4

Paleolithic hunter-gatherers were in parts of Egypt from at least 500,000 years ago. Living in small migratory groups, they mainly left evidence of stone tools at their camp sites in locations in the Western Desert when there were less arid periods than today, but in the Nile Valley there is much less early evidence. By around 21,000 years ago in the Late Paleolithic some major cultural changes seem to have been taking place in the Nile Valley. Small stone tools called bladelets appeared for the first time, some of which were probably hafted, including arrowheads. Mortars and pestles also appeared, to process wild plants which were consumed, especially tubers. Fishing was also an important part of the subsistence. At Qurta in Upper Egypt, rock drawings of animals (mainly wild cattle) and a few stylized humans provide evidence of symbolic behavior from this period. Dating from around 14,000–12,000 bp, the earliest cemeteries in Lower Nubia have some burials with evidence of violent deaths.

Relatively little is known of the Epipaleolithic, the last period of the Old Stone Age in Egypt. Although evidence for the transition to a Neolithic economy is missing in Egypt, after ca. 8800 BC in the early Holocene, when less arid conditions prevailed, people were once again living in parts of the Western Desert. The Saharan Neolithic is characterized by ceramics in addition to stone tools, and perhaps the herding of domesticated cattle. Hunting and gathering also continued. After ca. 6800 BC some Saharan Neolithic settlements may have been permanent ones. But by ca. 4900 BC the Western Desert was once again arid and Neolithic cultures continued elsewhere, in the oases and Nile Valley.

The earliest evidence of a Neolithic economy, in which people were cultivating domesticated cereals (emmer wheat and six-row barley) and herding domesticated animals (sheep/goat and cattle), is found in northern Egypt, at Faiyum A sites, but without permanent houses or villages, and slightly later at Merimde Beni-Salame. With the exception of cattle, none of these species of domesticated plants and animals is found in Egypt in a wild form, and it is generally agreed that after ca. 6000 BC they were introduced into Egypt from southwest Asia, where they had been domesticated from ca. 8000 BC onward. In the Nile Valley the Neolithic spread from north to south, appearing later in Middle Egypt with the Badarian culture, ca. 4500–4000 BC. In Upper

Egypt Neolithic villages were not well established until after ca. 4000 BC, with the rise of the Predynastic Naqada culture.

1. What is the stone tool industry of the Lower Paleolithic and what is its most characteristic stone tool? What species of early man made this stone tool?
2. During which Paleolithic periods is there skeletal evidence of modern humans in Egypt, and where has this evidence been found?
3. What kind of subsistence was practiced in the Lower and Middle Paleolithic periods, and how does this differ from the Late Paleolithic? Be specific about archaeological information from different sites.
4. Why are there so many gaps in the archaeological record for various Paleolithic periods?
5. Define and discuss the terms "Neolithic" and "Neolithic economy." Why was the Neolithic such a significant change in culture, as well as technology?
6. What and where is the earliest Neolithic evidence in Egypt? How does this evidence compare with early Neolithic cultures in southwest Asia?
7. How and why did a Neolithic economy begin in Egypt, and where is there archaeological evidence of this?
8. Later evidence of Neolithic cultures appears in Middle and Upper Egypt. What can be inferred from this about Neolithic technology and different environmental settings in Egypt?
9. What is the principal significance of the development of a Neolithic economy for Egyptian civilization?
10. What is the earliest evidence of cemeteries in the Nile Valley, and what do these burials represent?
11. Later Badarian burials symbolize what types of beliefs?

Chapter 5

The Predynastic Period spans the fourth millennium BC, during which there is evidence of two different culture groups, the Lower

Egyptian culture and the Naqada culture of Upper Egypt. Social and economic complexity increased in the Naqada culture, as evidenced in Upper Egyptian cemeteries. By the mid-fourth millennium the Naqada culture began to expand northward. Unification of Egypt into one large territorial state occurred late in the fourth millennium BC, at some point after there is evidence of only Naqada culture pottery and other artifacts in Delta sites.

The early state of Dynasty 0 and the 1st and 2nd Dynasties is characterized by the institution of kingship, which ruled through an administrative hierarchy. The capital at Memphis was founded, as were administrative centers throughout the kingdom. Writing had been invented in late Predynastic times, and undoubtedly facilitated the administration of the state. Taxes were paid to the state in the form of agricultural surplus, which supported full-time specialists, including craftsmen associated with the court.

The Early Dynastic state was highly stratified, as evidenced in its burials. Social stratification and rule by the king were justified by ideology and an incipient form of state religion. Probably most important ideologically, for the king as well as for most social strata, was the mortuary cult. Monumental architecture of tombs and mortuary cult structures, probably built by conscripted labor, became symbolic of the state and its government.

Long-distance trade was an important resource for the royal economy, and in later Predynastic times and the 1st Dynasty Egypt expanded its control into Lower Nubia and southern Palestine. Both of these expansions beyond Egypt's borders were military and commercial in nature.

Throughout the course of the Early Dynastic Period, royal control was consolidated and its institutions were strengthened, so that by the beginning of the Old Kingdom, in the 3rd Dynasty, the monuments of the state symbolized a new order of control, with vast resources – both material and human – in the "Age of the Pyramids."

1. How did social organization change in Egypt during the fourth millennium BC, and what is the archaeological evidence of this?
2. Discuss some of the major differences between the Lower

Egyptian culture and the Naqada culture of Upper Egypt.

3. What was the A-Group culture and where was it located? What explains its disappearance in the early third millennium BC?
4. Is there evidence for kingship in Predynastic Egypt? What characterizes Egyptian kingship in the Early Dynastic Period?
5. Discuss processes of state formation in Egypt in the late fourth millennium BC, and archaeological evidence for this. Does the archaeological evidence sufficiently explain how the early state formed?
6. What are some of the major characteristics of the Early Dynastic state in Egypt?
7. Why was agricultural surplus, and control of it, so important for the functioning of the Egyptian state?
8. What is the significance of Petrie's invention of Sequence Dating, not only for Egyptian archaeology, but also for archaeology in other parts of the world?
9. Why was the invention of writing important for the early Egyptian state? What evidence is there for writing in the Early Dynastic Period?
10. Was the Early Dynastic state in Egypt an urban one? What are some of the characteristics of urban society?
11. Discuss evidence for state ideology in the 1st and 2nd Dynasties.
12. How large was the early state in Egypt, and what is known about its foreign relations?
13. How was the early state in Egypt organized politically and socially? Is such socio-political organization sufficient to explain control and long-term stability of a very large territorial state?

Chapter 6

The Old Kingdom represents a new level of state control, symbolized in the construction of pyramids. Djoser's Step Pyramid at Saqqara (3rd Dynasty) is the earliest large monument in the world built in stone, with a pyramid, temples, courtyards, and “dummy” shrines inside a walled enclosure. Sneferu, the first king of the 4th Dynasty, built three pyramids, the last of which was a true pyramid. His son Khufu chose Giza as the site of his pyramid, the largest ever constructed. By this time the basic elements of a pyramid complex had evolved: a walled pyramid with much smaller subsidiary (queens’) pyramids, a mortuary temple on the pyramid’s east side, and a causeway leading to the valley temple, connected by a harbor and/or canals to the river. Khafra’s slightly smaller Giza pyramid is associated with the Great Sphinx, which also had its own temple. The third pyramid at Giza, built by King Menkaura, was small and unfinished, but the complex’s valley temple contained a remarkable collection of royal sculpture.

Mastaba tombs of high officials and the royal family were built at Giza, with the highest-status tombs to the east of Khufu’s pyramid. The unmarked tomb(?) of Khufu’s mother Hetepheres I, at the bottom of a ca. 30-meter vertical shaft, contained furniture that was originally covered with gold foil, but the sarcophagus was empty. Hundreds of tombs of pyramid overseers, artisans, and even some laborers are located in the southeastern part of Giza, near a large settlement complex (Heit el-Ghurab site). In the northern part of the settlement is the Gallery Complex, which consists of rows of long narrow rooms, some of which may have been used as barracks for pyramid workers. To the southeast is the Royal Administrative Building, where large granaries were located. The Eastern Town was a large unplanned town to the east – perhaps where many of the pyramid workers lived, with higher status officials in the larger houses of the Western Town to the southwest.

The 5th-Dynasty pyramids were much smaller than those at Giza, but there is a corresponding increase in the size of their mortuary temples. With the increasing importance of the cult of the sun god Ra, most of the 5th-Dynasty kings also built sun temples, which were economically associated with their pyramid complexes and estates. The interiors of later Old Kingdom pyramids were covered with Pyramid Texts, royal mortuary texts of a much earlier origin.

Multi-room mastaba tombs of high officials that were elaborately decorated with reliefs are found in the Memphis area during the

5th and 6th Dynasties. The high quality of these reliefs and excavated tomb goods represents the work of court-centered artisans of great skill. In the 6th Dynasty, as provincial rulers in Upper Egypt became increasingly powerful, they made their own local tombs, often rock-cut ones that followed a Memphite model. Texts in the Aswan tomb of a local ruler, Harkhuf, describe his expeditions south to the land of Yam, to obtain highly desired raw materials for the crown, which were earlier obtained through Egyptian centers in Lower Nubia – abandoned by the 6th Dynasty. At the same time there was increased Egyptian activity in the Western Desert at Dakhla Oasis, where a settlement and cemetery have been excavated, including mastaba tombs of the town's governors.

After the very long rule of Pepy II, centralized control of the state collapsed during what is called the First Intermediate Period. Aside from a very small pyramid of stone and mud built by King Ibi of the 8th Dynasty (and an unfinished mud-brick monument of some unknown ruler at Kom Dara in Middle Egypt), no royal monuments date to this period. At Herakleopolis in Middle Egypt a line of rulers (9th, 10th Dynasties) eventually emerged controlling parts of northern Egypt, and local rulers in the south left tomb biographies and stelae boasting of their political and economic control. Although this period was a time of socio-political competition and perhaps some economic turmoil, provincial graves demonstrate a greater number of burials of different strata than previously and a wider distribution of grave goods, many of which were in imported stones and made by local craftsmen.

1. What evidence is there for highly centralized economic control of the state in the early Old Kingdom, and how can it be explained?
2. How important was the ideological role of the king for the Old Kingdom state?
3. How does the Step Pyramid complex differ in design from the later pyramids of the 4th Dynasty and onward? What may its different elements symbolize?
4. Discuss evidence for the increasing importance of the cult of the sun god Ra in the Old Kingdom.

5. What is the evidence for the transition from a stepped pyramid to a true four-sided one, and why did this occur?
6. How was the Great Pyramid at Giza constructed and how was the work organized? Where did the workers, artisans, and overseers live, and what does this evidence suggest about state-controlled projects?
7. What is the evidence at Giza for a highly stratified society in the 4th Dynasty?
8. What was an Old Kingdom pious foundation, and what evidence is there at Giza for such institutions?
9. In the 5th Dynasty most kings built a pyramid complex *and* a sun temple. Describe what is known archaeologically about these sun temples, and reasons for their construction.
10. What are some of the socio-political, economic, and ideological explanations for construction and design changes in pyramid complexes of the later Old Kingdom?
11. In the 6th Dynasty, Egypt no longer had settlements in Lower Nubia, but an Egyptian settlement and cemetery were located in Dakhla Oasis. Discuss internal and external reasons for these developments, and the changing evidence for Egyptian trade with regions to the south.
12. Who were the C-Group peoples and what explains their appearance in Nubia in the 6th Dynasty?
13. Discuss the most likely reasons for the collapse of state power after the end of the 6th Dynasty. What different types of evidence are there for this major socio-political change?
14. How does the archaeological evidence of the First Intermediate Period differ from that of the 6th Dynasty?

Chapter 7

After conflict between the Herakleopolitan kingdom in northern Egypt (the 9th/10th Dynasties) and the southern 11th Dynasty, Egypt was reunified into a large territorial state by Mentuhotep II of Thebes. Early rulers of the 11th Dynasty built rock-cut *saff* tombs in western Thebes, but Mentuhotep II's monument there was much more impressive, consisting of a large square structure built on top of two terraces, behind which were a courtyard, hypostyle hall, and subterranean tomb. Kings of the 12th Dynasty once again built pyramids, reasserting the royal symbolism of this monument type. These pyramids are to the south of the Old Kingdom ones, in the vicinity of the capital at Itj-tawy, somewhere in the Faiyum region. Senusret III, who initiated a major reorganization of the state bureaucracy, built a large pyramid at Dahshur, but he also created a mortuary complex at South Abydos. Later 12th-Dynasty pyramids were constructed with mud-brick fill and are not well preserved; even less is known about the mortuary monuments of the many kings of the 13th Dynasty.

Large private tombs were also built in Middle Kingdom times. Mastaba tombs of high officials are found near the royal pyramids, and until the reign of Senusret III large rock-cut tombs were built by local rulers in Middle Egypt. Wooden models of workers were placed in private tombs from the First Intermediate Period onward, and a remarkable cache of models was found in the early 12th-Dynasty tomb of Meketra at Deir el-Bahri.

Middle Kingdom kings actively constructed temples throughout Egypt, but most of these were disassembled when stone temples were constructed in the New Kingdom and later. A small stone shrine of Senusret I at Karnak was reassembled in the mid-20th century after it had been recovered from being used as fill in an 18th-Dynasty pylon. With the increasing prominence of the cult of Osiris, Abydos became an important cult center in the Middle Kingdom. Pilgrims came there to partake in the festival along the route from the 12th-Dynasty temple to what was believed to be the tomb of Osiris, in the Early Dynastic royal cemetery. Kings also built *ka*-chapels at Abydos, as did private individuals.

Kahun, a workers' town near Senusret II's pyramid, is an example of a planned state settlement laid out on a grid. Five large houses and what Flinders Petrie called the "Acropolis" were built on the north side of the town, which is where the town mayor and high officials lived. Many tools, of craftsmen, farmers, and fishermen, were excavated there, as were toilet articles, jewelry, and children's toys. Well-preserved papyri include literary texts, administrative and legal documents, letters, veterinary and gynecological texts, mathematical calculations, and a so-called “census list.”

The huge mud-brick forts built in Lower Nubia in the 12th Dynasty are also examples of planned state settlements – for soldiers and officials. Built to control the movement of local peoples there (C-Group and *Medjay*), the forts also facilitated and protected trade and communication in the region, as well as Egyptian access to gold mines in the Wadi Allaqi. The Egyptian frontier was pushed southward to Semna by Senusret III, who campaigned and built more forts in this region. Eventually numbering 17, the forts housed hundreds of soldiers, scribes, and officials, all of whom had to be supplied with food, goods, and materials – most of which came from Egypt. The Nubian forts are evidence for a highly organized state bureaucracy and its redistributive system during the 12th Dynasty.

Other impressive state-sponsored activities included mining in the Eastern Desert and Sinai. Mines for galena at Gebel Zeit near the Red Sea were up to 150 meters in vertical depth. Turquoise and copper were mined in the southern Sinai at Serabit el-Khadim and Wadi Nasb, respectively. Inscriptions in a script called Proto-Sinaitic, which was used to write a probably West Semitic language, are found at Serabit. Similar rock inscriptions found in the Western Desert in the Wadi el-Hol may be even earlier evidence of an alphabetic writing system.

A major reason for the location of Egyptian forts in Lower Nubia was the rise of the powerful Kerma kingdom in Upper Nubia. Kerma kings eventually controlled all of Nubia during the Second Intermediate Period, when Theban kings only ruled in southern Egypt. Kerma kings built large tumuli, some of which contained sacrificed humans, and a large city has also been preserved. The Kerma kings became allies of the Hyksos kings (15th Dynasty) in northern Egypt, rulers of Asiatic origin whose capital was in the eastern Delta at Avaris/Tell el-Dab’a. Eventually, Theban kings conquered the Hyksos state, ushering in the New Kingdom, when the Kerma polity was finally defeated.

1. How do the royal mortuary monuments of the 11th Dynasty differ from those of the late Old Kingdom?
2. What did Mentuhotep II accomplish and how is this reflected in his mortuary complex? How does it differ from the earlier

saff tombs?

3. Discuss the plan of an early 12th-Dynasty pyramid complex. How did this differ from late Old Kingdom ones, and what kind of continuity can be seen?
4. Where do you think Senusret III was actually buried? Discuss reasons for and against his actual burial being located at Dahshur or South Abydos.
5. Discuss some of the accomplishments in Egypt and abroad that occurred during Senusret III's reign.
6. Why did Abydos become an important cult center in the Middle Kingdom and what was its ideological significance? Discuss archaeological evidence there for cult and mortuary monuments. What kinds of symbolism are associated with its landscape?
7. Why is there little evidence of Middle Kingdom temples, and how is this demonstrated at Medamud?
8. Discuss different types of evidence for domestic architecture in the Middle Kingdom.
9. Discuss evidence for state mining activities at one site outside the Nile Valley during the Middle Kingdom.
10. Why did the Egyptians build so many forts in Lower Nubia during the Middle Kingdom, and how can their different locations be explained? What do these forts represent in terms of state organization?
11. Who were the *Medjay* and what is known about them archaeologically and textually? Can they be considered an ethnic group? How can they be distinguished archaeologically from the C-Group?
12. What distinguishes the Kerma culture from Egyptian material culture of the Middle Kingdom? Discuss differences in architecture, town planning, burials, and artifacts. Does such evidence clearly support the view that the people of the Kerma culture were a different ethnic group?
13. Why is George Reisner's interpretation of Kerma as an Egyptian outpost no longer accepted?

14. What evidence is there for Egyptians continuing to live and work in Upper and Lower Nubia during the Second Intermediate Period?
15. Who were the Hyksos and where was their capital? How and when do they become distinct there in terms of the archaeological evidence?
16. When did the Hyksos kingdom end, and what kind of evidence is there for this?

Chapter 8

Divided rule between Hyksos kings who controlled northern Egypt and Theban kings in the south ended with the conquest of the north by Ahmose, the first king of the 18th Dynasty. Not content to stop at Gaza, Ahmose fought the Hyksos in southern Palestine. Subsequent military campaigns of this dynasty would penetrate farther north, and for the first time Egypt had an extensive empire in southwest Asia. The Kerma kings were also vanquished, with Egyptian control extending above the Fourth Cataract. As a result, Egypt in the 18th Dynasty became a very wealthy state, with gold from Nubia and exotic raw materials from farther south, and tribute and war booty from conquered states in southwest Asia.

Egyptian temples were major beneficiaries of the new wealth, especially the Temple of Karnak, for the cult of Amen-Ra. Most of what is visible today at Karnak is from the New Kingdom and later. Probably the most impressive structure of the 18th Dynasty at Karnak is Thutmose's III's Festival Temple, and in the 19th Dynasty Rameses II completed the temple's enormous Hypostyle Hall. Much of the Temple of Luxor was built by Amenhotep III, with major additions by Rameses II.

Across the river in western Thebes, kings of the New Kingdom built their mortuary temples, which also centered on the worship of Amen and were ritually connected to the Karnak and Luxor temples by the yearly Perfect Festival of the Valley. Queen Hatshepsut's temple built in the cliffs at Deir el-Bahri is the first truly impressive royal mortuary temple of the period. Although Amenhotep III built an enormous mortuary temple, not much of it remains today except for two colossal seated statues of the king.

Much of Rameses II’s mortuary temple, the Ramesseum, was disassembled for use in later constructions, but many of its vaulted mud-brick storerooms are still standing. The best-preserved of these royal monuments is the Medinet Habu mortuary temple of Rameses III of the 20th Dynasty, which later became a fortified settlement.

Although there were certainly major cult temples at Memphis and Rameses II’s capital of Piramesse in the Delta, little remains of them. Better-preserved evidence is found at Abydos, the cult center of the god Osiris, which was an important focus of royal construction in the New Kingdom. In South Abydos Ahmose built a pyramid and terraced temple, and shrines for his grandmother and chief wife. Later, in the 19th Dynasty, Sety I and Rameses II built a major temple to Osiris, behind which is the so-called Osireion, the tomb of the god.

Temples and shrines to Egyptian gods were also built throughout Lower and Upper Nubia. A number of Middle Kingdom forts were restored, and new temples were founded. Permanent settlements were associated with many of these forts and temples, and administrative centers existed at Aniba and Amara. The most famous Nubian monuments are the two rock-cut temples of Rameses II at Abu Simbel.

In Egypt, the remains of 18th-Dynasty palaces have been found in western Thebes at Malkata (Amenhotep III), and in Middle Egypt at Tell el-Amarna, the briefly occupied capital of Akhenaten, where an entire royal city has been preserved. Evidence at Amarna includes palaces, temples and shrines to the god Aten, a central administrative district with residences of various statuses extending southward, a walled workmen’s village, and rock-cut tombs in the eastern cliffs.

Except for Akhenaten, New Kingdom kings built their hidden tombs in western Thebes in the Valley of the Kings (actually two wadis, east and west). The most famous of these royal tombs belonged to Tutankhamen, the young king who succeeded Akhenaten. Although it was entered by robbers, Tutankhamen’s tomb was resealed, and was finally opened in 1922 by Howard Carter. Stripped and robbed of their rich jewelry, the mummies of other New Kingdom kings were reburied by priests in two caches:

in side chambers of the tomb of Amenhotep II and in a family tomb of the High Priest of Amen-Ra, Panedjem II, at Deir el-Bahri. The Valley of the Kings was not only the burial place of royalty: Tomb KV 5, with over 100 chambers and corridors, was where a number of Rameses II's many sons were buried. Royalty were also buried in the Valley of the Queens in the 19th and 20th Dynasties, the most impressive tomb of which belonged to Rameses II's chief wife Nefertari.

Elites were also buried in western Thebes, and another cemetery of high officials, especially from the post-Amarna era, is located at Saqqara. Two non-elite cemeteries are associated with the village of Deir el-Medina in western Thebes, where the workmen in the Valley of the Kings (and Queens) lived with their families. This settlement has provided not only well-preserved residential and mortuary evidence of generations of its inhabitants, but also a wealth of inscriptional evidence, including papyri and thousands of ostraca, which greatly enhance what is known about the village through archaeology.

1. The end of the Second Intermediate Period represents a new era of international relations for Egypt. What kind of evidence is there for this, and how were Egypt's foreign relations transformed over the course of the New Kingdom?
2. How do cult temples in the New Kingdom differ from earlier ones? Does this reflect a change in ideology, material wealth, or other factors?
3. Why are New Kingdom royal burials different from those of the Old and Middle Kingdoms? Where were many of the royal mummies of the New Kingdom actually found and why?
4. How did the royal mortuary cults of the New Kingdom differ from earlier ones, and what is the evidence for this?
5. How were the royal mortuary cults of the New Kingdom linked ritually and symbolically with the cult temples on the east bank?
6. Given what is known about settlements in ancient Egypt, is Amarna a typical royal capital? What kind of planning is evident at Amarna?
7. What are some of the material ways in which Akhenaten's new

ideology was symbolized?

8. Did deeply seated mortuary beliefs really change in the Amarna Period?
9. What is some of the archaeological evidence for the events that followed Akhenaten's reign, not only at Amarna, but also in Thebes and Saqqara?
10. What kind of social organization can be inferred from the settlement and burial evidence at Amarna?
11. Compare and contrast domestic evidence at Tell el-Amarna and Deir el-Medina.
12. Does textual evidence support or contradict what is known about Tell el-Amarna and Deir el-Medina from the archaeological evidence?
13. How does archaeological evidence from the 20th Dynasty reflect changing socio-political conditions? What are some of the texts that expand on the internal and external events of this period?
14. How did Egyptian occupation of Nubia in the New Kingdom differ from that of the Middle Kingdom there? Why did such changes occur?

Chapter 9

The Third Intermediate Period (21st–25th Dynasties) was a time of political fragmentation, with foreign invasions of Egypt in the 8th–7th centuries BC. In the 21st Dynasty a new royal city was founded at Tanis in the northeastern Delta, where royal and high-status burials of the 21st and 22nd Dynasties have been excavated in a subterranean monument. Until the Assyrian invasions during the reign of Taharqo (690–664 BC), Kushite rulers of the 25th Dynasty controlled both Egypt and Nubia, but their burials were near their polity's cult center at Gebel Barkal in Upper Nubia, first at el-Kurru and later at Nuri.

Following the third invasion of Egypt by the Assyrians, an Egyptian polity centered at Sais in the northern Delta gained control of the country. The 26th (Saite) Dynasty was the first of the Late Period (26th–31st Dynasties). Although the site of Sais has not been well preserved, large tombs of high-status officials and priests of the Kushite and Saite dynasties have been excavated in western Thebes at el-Asasif, and in the Memphis area, where ingeniously designed tombs foiled ancient attempts at grave robbing. The Saite Period was one of economic prosperity, evidenced in part by large-scale foreign trade, from Greek cities to the southern Red Sea region. Animal cults, especially that of Apis which produced the Serapeum at Saqqara, where the sacred Apis bulls were buried, became popular during this dynasty and continued to be important through Ptolemaic times.

In 525 BC Egypt was conquered by yet another foreign power, the Achaemenid Persians, and the 27th Dynasty was a period of Persian control of the country. Under the Persians a Delta canal was completed through the Wadi Tumilat, which connected the Mediterranean with the Red Sea. Occupation at the Wadi Tumilat site of Tell el-Maskhuta expanded inside the huge fortification walls built by the Saites. Persian rule was not popular, however, and was overthrown during the 28th, 29th, and 30th Dynasties. Major monuments were built by two 30th-Dynasty kings, Nectanebo I and II, but indigenous rule was finally put down by the Persians, who controlled Egypt briefly (31st Dynasty). The Persian Empire (and Persian control of Egypt) was destroyed by the conquests of Alexander of Macedon, and subsequently Egypt was ruled by the Ptolemaic Dynasty, who were of Macedonian descent.

1. Compared to the New Kingdom, how does socio-political organization change in the Third Intermediate Period?
2. Where was the seat of the 21st Dynasty and what evidence demonstrates that this was not a 19th Dynasty capital?
3. What evidence is there of changes as well as continuity in the royal mortuary cult of the 21st and 22nd Dynasties?
4. What kind of monumental evidence demonstrates the rise of a polity at Napata/Gebel Barkal prior to the 25th Dynasty?
5. What changes are evident in the Kushite mortuary cult following the conquest of Egypt by these kings? Does this reflect an “Egyptianization” of Kushite culture, or were some Egyptian traits only selectively adopted and transformed?

What does this suggest about the Kushite belief system?

6. Given what is known archaeologically about Napata, how would you describe the function/use of this site? Is there any evidence there to suggest how this state was organized economically?
7. The Delta canal that was built during the 26th–27th Dynasties is not the same route as the Suez Canal that was built in Egypt in the 19th century AD. What is the route through the Delta of the ancient canal, and how would this canal have affected patterns of international trade?
8. What types of sites provide evidence of socio-political upheavals during the Late Period? Where are they located and why?
9. Why did the concept of Egyptian kingship and support of temple cults remain strong throughout the Late Period?
10. How might the popularity of animal cults in the Late Period be explained?
11. Although Egypt was ruled by different foreign groups/powers during parts of the Third Intermediate Period and Late Period, its civilization remained essentially Egyptian. How and why can this be explained?

Chapter 10

The Ptolemaic Dynasty, which was founded by Ptolemy I after Alexander the Great's conquest of Egypt, consisted of rulers of Macedonian descent. Essentially a Greek (and not Egyptian) city, Alexandria in the northwestern Delta was the jewel of Ptolemaic Egypt. But Egyptian temples continued to be built and decorated in Ptolemaic as well as Roman times, with the cult of Isis becoming especially important. Two of the best preserved temple complexes in Egypt are the Greco-Roman ones of Dendera and Philae.

New settlements were founded in the Faiyum region in the early Ptolemaic Dynasty, as agricultural activities were intensified and expanded there. Excavations of a number of Greco-Roman settlements in the Faiyum, such as Tebtunis, Narmouthis, and Karanis, have yielded remains of temples and houses with well-preserved artifacts, especially inscribed papyri and ostraca, which have provided much information about the organization and economies of these towns. In the Roman cemetery at Hawara, Flinders Petrie excavated mummies of a new type, with Roman-style portraits painted on wooden panels placed over the mummy's face.

Roman Period settlements have also been well preserved at oases in the Western Desert. Probably thousands of mummies remain to be excavated in tombs in Bahariya Oasis, where Egyptian archaeologists have also uncovered the remains of a Roman fortress and a winery. In Dakhla Oasis, almost 250 Roman Period sites have been located, including the town of Kellis, where excavations of one house uncovered an enormous quantity of texts, on wooden boards and papyri.

Under Ptolemy II ports were founded on the Red Sea, and were connected by a number of desert roads to the Nile Valley. In Roman times, trade goods and raw materials from India (and beyond), and the Horn and coast of East Africa, passed through these ports and desert routes, and then down the Nile to Alexandria. Large building stone was quarried in the Eastern Desert, especially grey granodiorite from Mons Claudianus and imperial purple porphyry from Mons Porphyrites. These stones too were taken (on carts) across the desert and then down the Nile, in enormously complex operations. Along the desert roads the Romans built forts, way stations, and cairns, and dug deep wells to supply fresh water to the many hundreds of soldiers and laborers required to operate these facilities and protect them.

In Lower Nubia, the site of Qasr Ibrim, now on a kind of island formed by the waters of Lake Nasser, continues to be excavated. The site was briefly occupied by the Romans, who also sacked Napata at this time (23 BC), but after a treaty with Augustus, it became an important Meroitic town. In the far south of Nubia, royal pyramids were built at Meroe after ca. 300 BC, and Meroitic kings continued to worship Egyptian gods in their temples and mortuary chapels.

The end of pharaonic civilization in Egypt came in the 4th–5th centuries AD with the increasing acceptance of Christianity, which occurred considerably later in Nubia.

1. How does the Ptolemaic Dynasty differ from earlier Egyptian dynasties?
2. What kind of projects were undertaken in the Faiyum region during the early Ptolemaic Dynasty and why?
3. What evidence of urbanism is there during the Ptolemaic Dynasty?
4. How does the city of Alexandria differ in plan and design from the pharaonic city of Tell el-Amarna (Chapter 8)?
5. The Macedonian rulers of Egypt had their own religion. Why did they support Egyptian cult centers and what is some of the evidence of this?
6. How were Egyptian cults transformed in Greco-Roman times?
7. How did Roman rule of Egypt differ from that of the Ptolemies? Can continuity be seen in Egyptian culture during Roman times?
8. Why were the Romans interested in much more intensive use of the oases of the Western Desert than in earlier periods? Discuss some evidence for Roman occupation in one oasis.
9. Why were the Romans interested in maintaining roads, forts, wells, and markers in the Eastern Desert?
10. How does the trade with parts of Africa to the south of Egypt (and the Indian Ocean) during Roman times differ from pharaonic trade with these regions?
11. Aside from transport of trade goods, what other activities were the Romans conducting in the Eastern Desert?
12. What kinds of transformation are seen in the mortuary cult in Egypt in Greco-Roman times?
13. What kinds of evidence are there at Qasr Ibrim to demonstrate Roman and then Kushite/Meroitic occupation?
14. Some pharaonic traditions of kingship and religion are evident at Meroe when it became the later capital of the Kushite state.

Discuss this evidence and reasons for continued emulation of Egyptian pharaonic symbols. How were these symbols transformed in Meroitic culture?

15. Are different factors/processes involved with the end of pharaonic civilization in Egypt and the collapse of the Meroitic state in Nubia, both of which occurred in the 4th century?

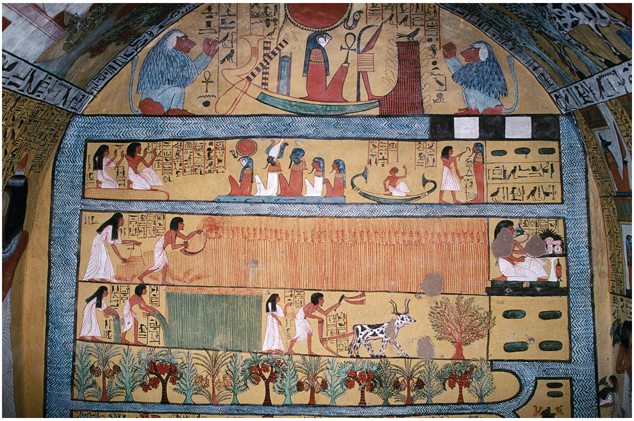
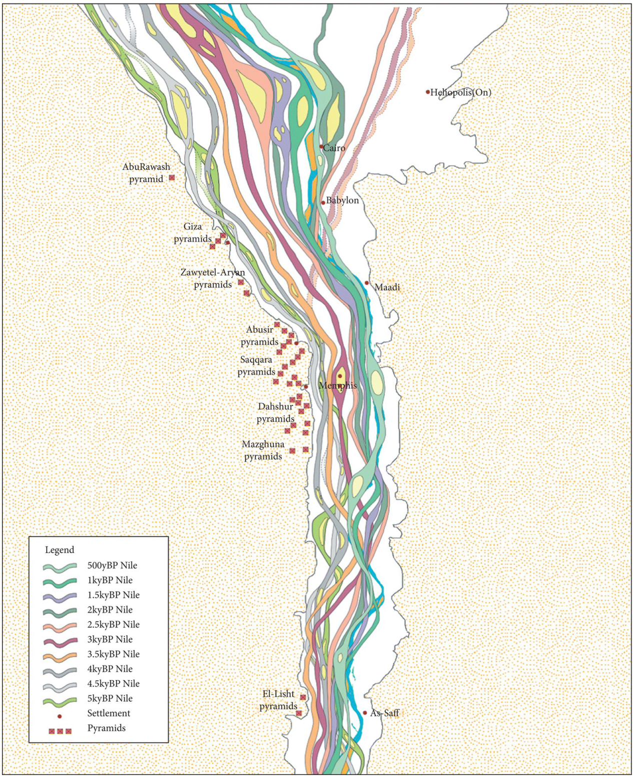


Plate 3.1 Changing positions of the Nile River over the past 5,000 years in relation to pyramid sites of the Old and Middle Kingdoms.

Source: Katy Lutley and Judith Bunbury, “The Nile on the Move,” *Egyptian Archaeology* 32 (Spring 2008), p. 5. Used by permission of Katy Lutley and Judith Bunbury.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4.5kyBP Nile
5kyBP Nile
Settlement
Pyramids
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As-Saff

Plate 3.2 Changing positions of the Nile River over the past 5,000 years in relation to pyramid sites of the Old and Middle Kingdoms.

Source: Katy Lutley and Judith Bunbury, "The Nile on the Move," *Egyptian Archaeology* 32 (Spring 2008), p. 5. Used by permission of Katy Lutley and Judith Bunbury.

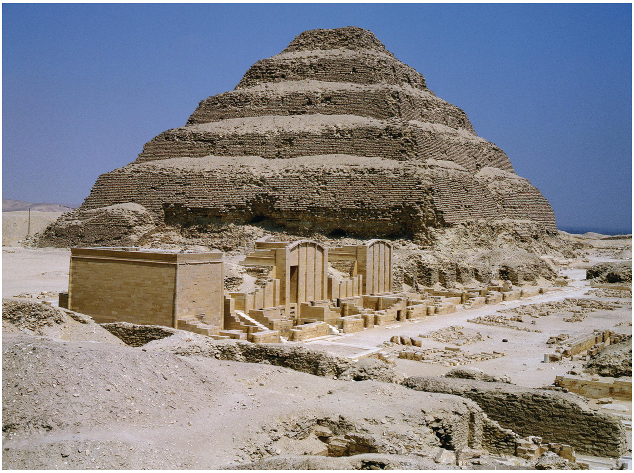

Plate 6.1 Step Pyramid of Djoser at Saqqara

Source: Werner Forman Archive.

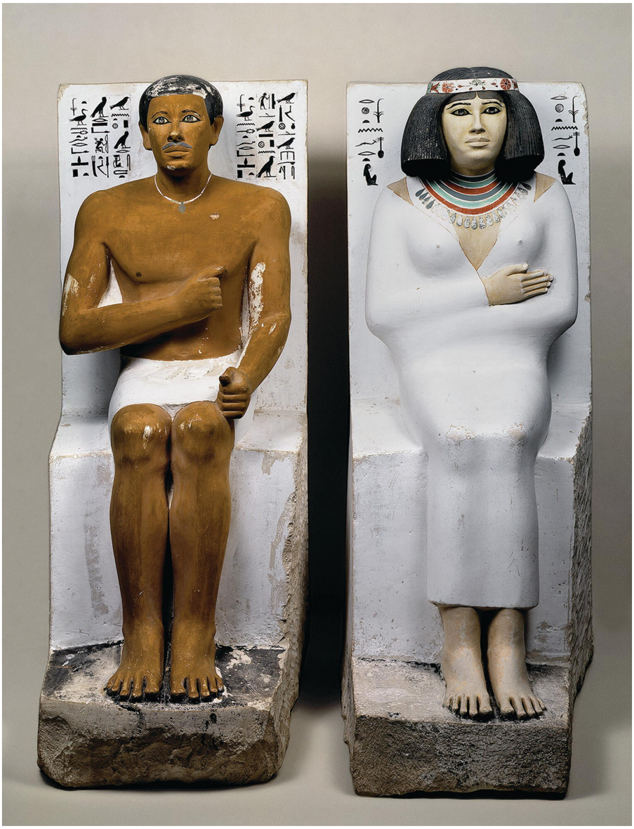

Plate 6.2 Statues of Rahotep and Nefert from their 4th-Dynasty tomb at Maidum.

Source: Jürgen Liepe.

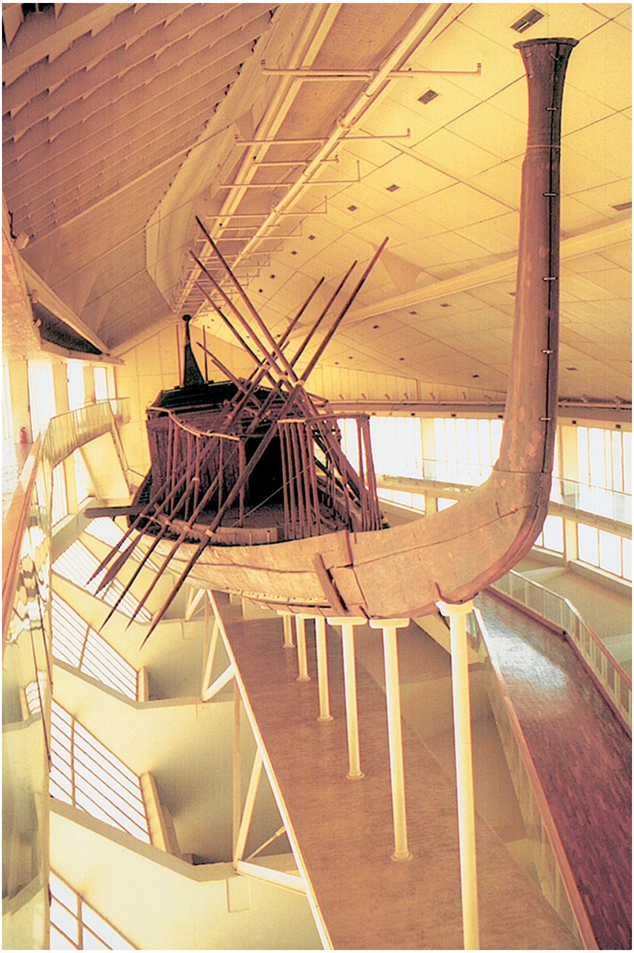

Plate 6.3 Khufu's reconstructed cedar boat in the museum next to his pyramid at Giza.

Plate 6.4 The Great Sphinx of Khafra at Giza.

Source: © Ariadne Van Zandbergen/Alamy.

Plate 6.5 Pair statue of King Menkaura and Queen Khamerernebty II excavated by George Reisner in Menkaura's valley temple at Giza.

Source: akg-images/Erich Lessing.

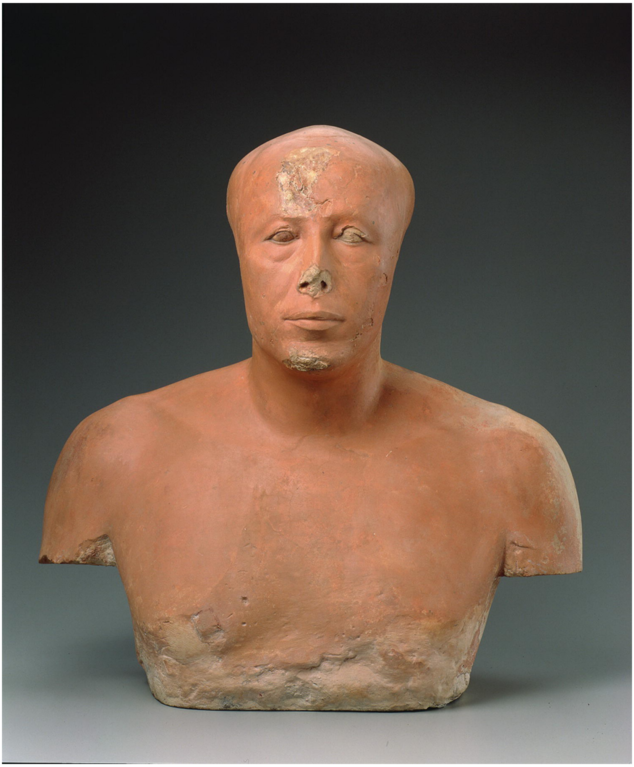

Plate 6.6 Painted limestone bust of Prince Ankh-haf from his 4th-Dynasty tomb (G 7510) at Giza.

Source: Museum of Fine Arts, Boston, Massachusetts, USA/Harvard University – Museum of Fine Arts Expedition/The Bridgeman Art Library.

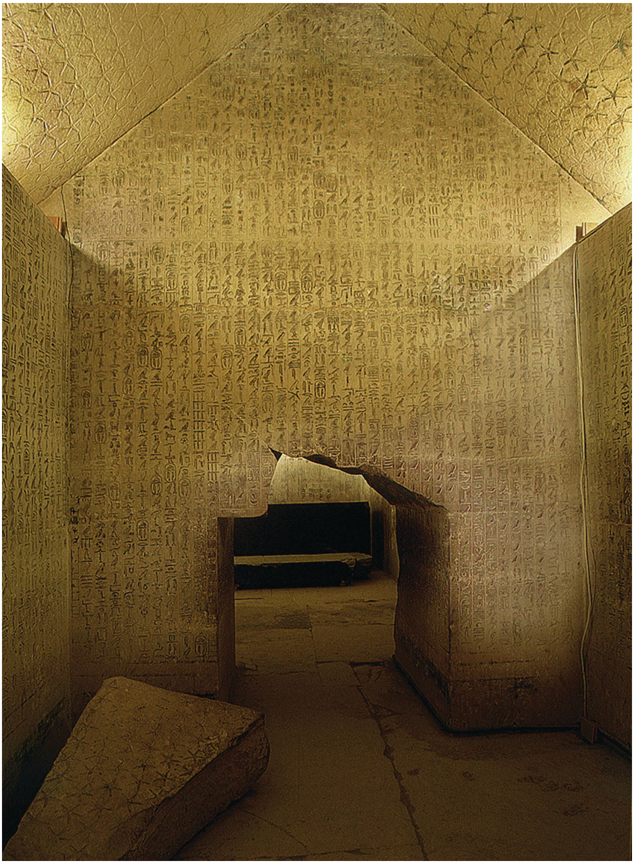

Plate 6.7 Pyramid Texts in the pyramid of Unas at Saqqara.

Source: Werner Forman Archive.

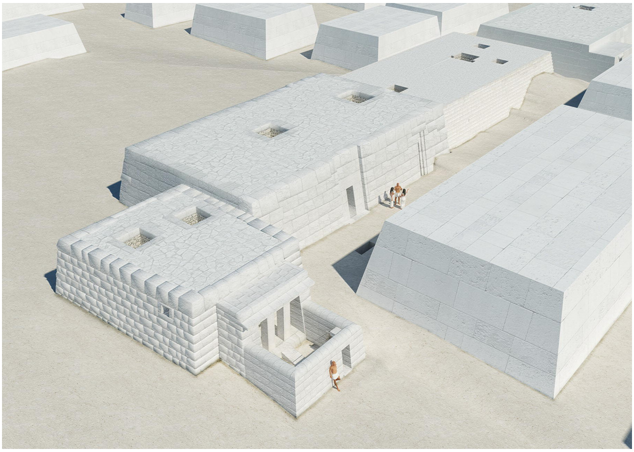

Plate 6.8 Rendered computer model of the G 2100 family mastaba complex (looking northwest) at Giza, based on original HU–MFA and German–Austrian Expedition plans and survey data.

Source: Used by permission of Peter Der Manuelian and Dassault Systèmes.

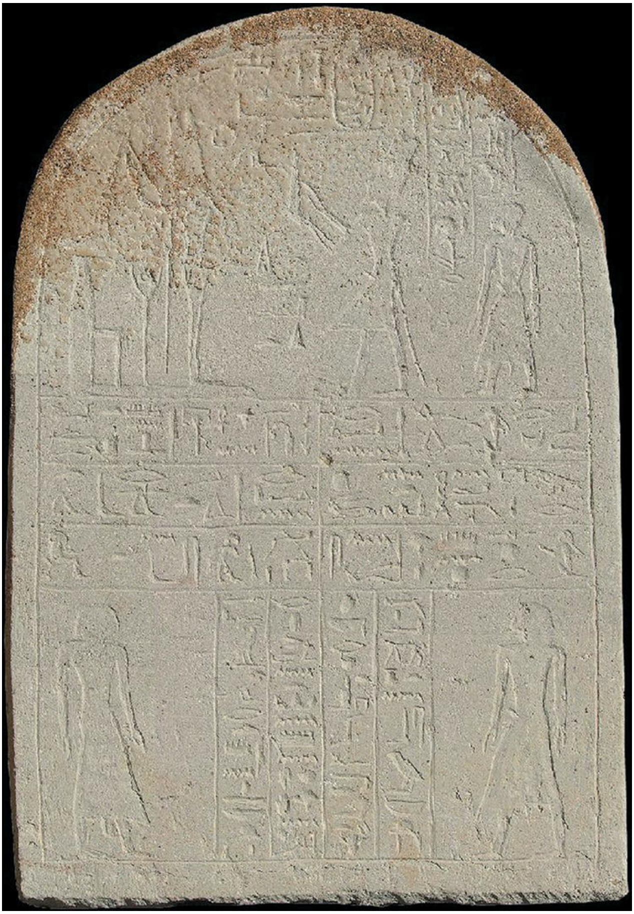

Plate 7.1 Inscribed stela excavated at Mersa/Wadi Gawasis.

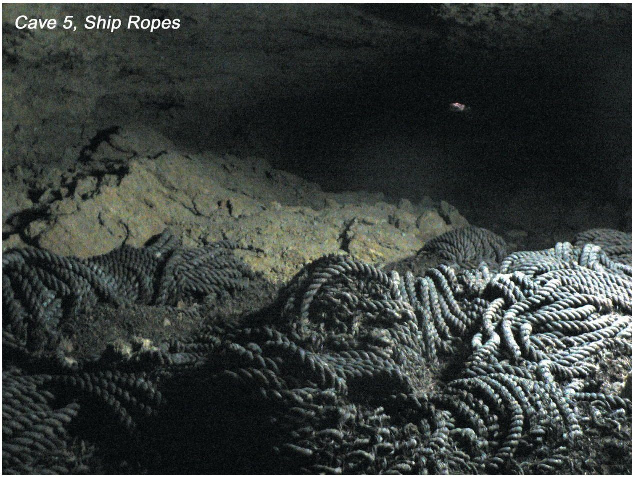
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Plate 7.2 View into Cave 5 at the Middle Kingdom port of Saww on the Red Sea, where 26 coils of rope were left by sailors almost 4,000 years ago.

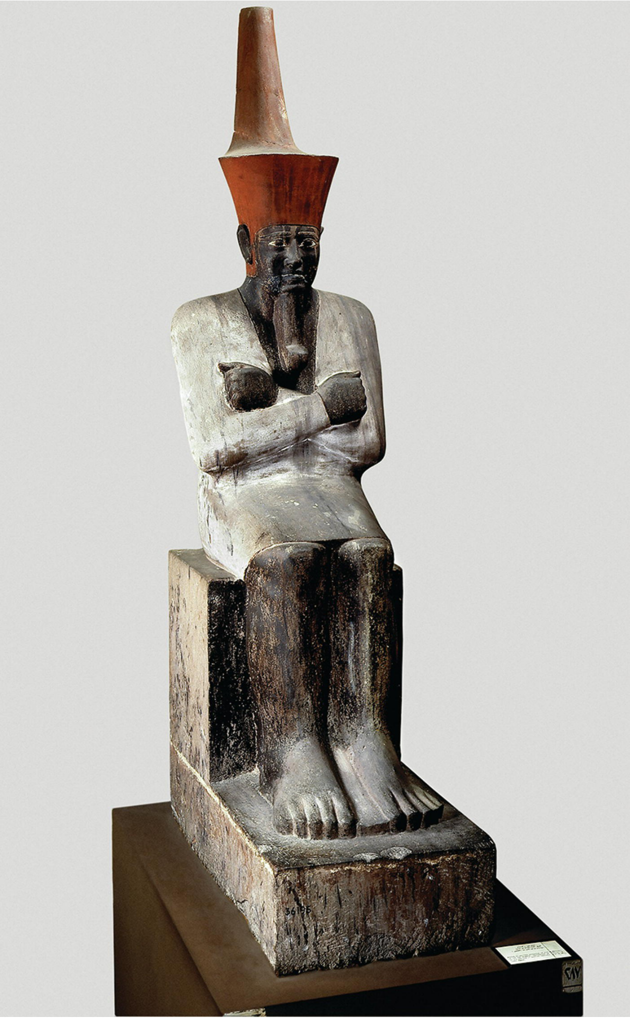

Plate 7.3 Statue of Mentuhotep II from his mortuary complex at Deir el-Bahri.

Source: Jürgen Liepe.

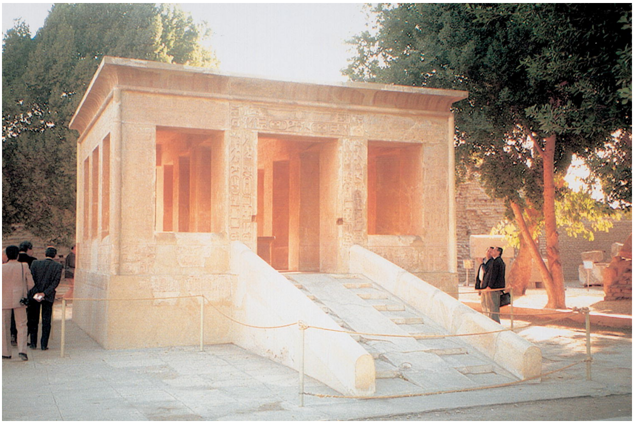

Plate 7.4 Reconstructed shrine of Senusret I at Karnak.

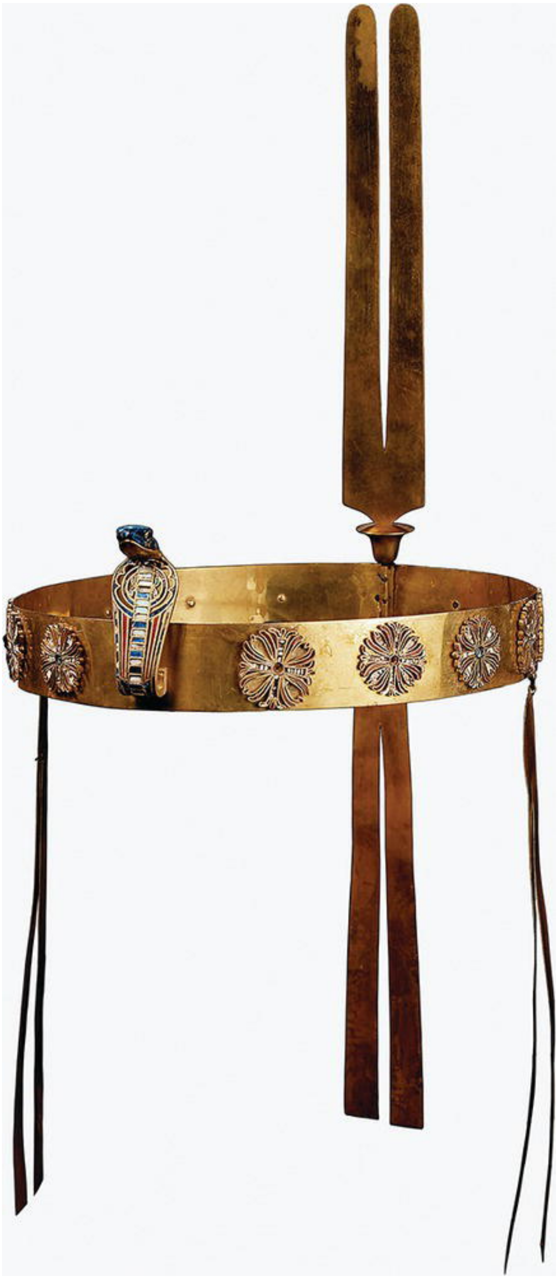

Plate 7.5 Gold headband of Princess Sit-Hathor-Iunet from her tomb at Lahun.

Source: Jürgen Liepe.

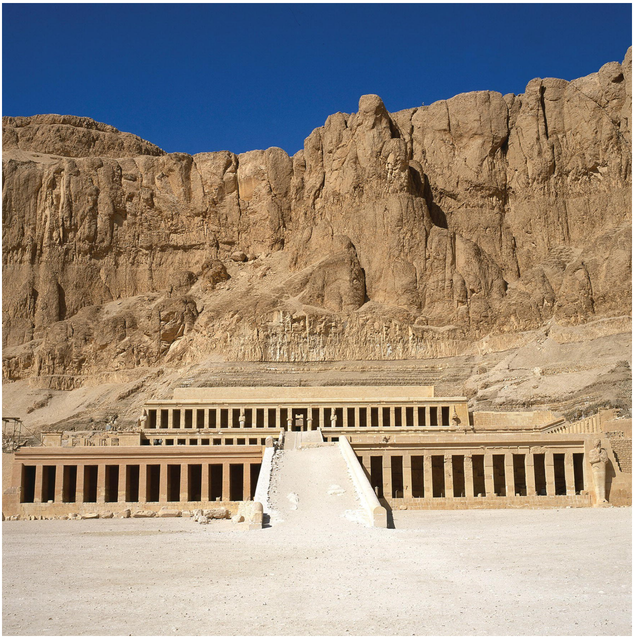

Plate 8.1 Mortuary temple of Hatshepsut at Deir el-Bahri.

Source: akg-images.

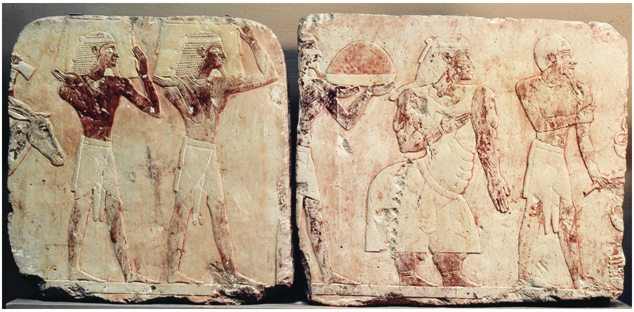

Plate 8.2 Punt relief from the second colonnade of Hatshepsut's temple at Deir el-Bahri.

Source: Werner Forman Archive/Egyptian Museum, Cairo.

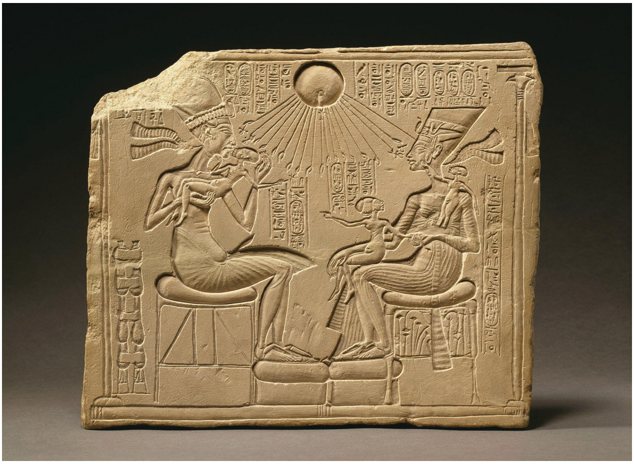

Plate 8.3 Relief of Akhenaten and Nefertiti seated below the Aten sun-disk.

Source: Werner Forman Archive/ Egyptian Museum, Cairo.

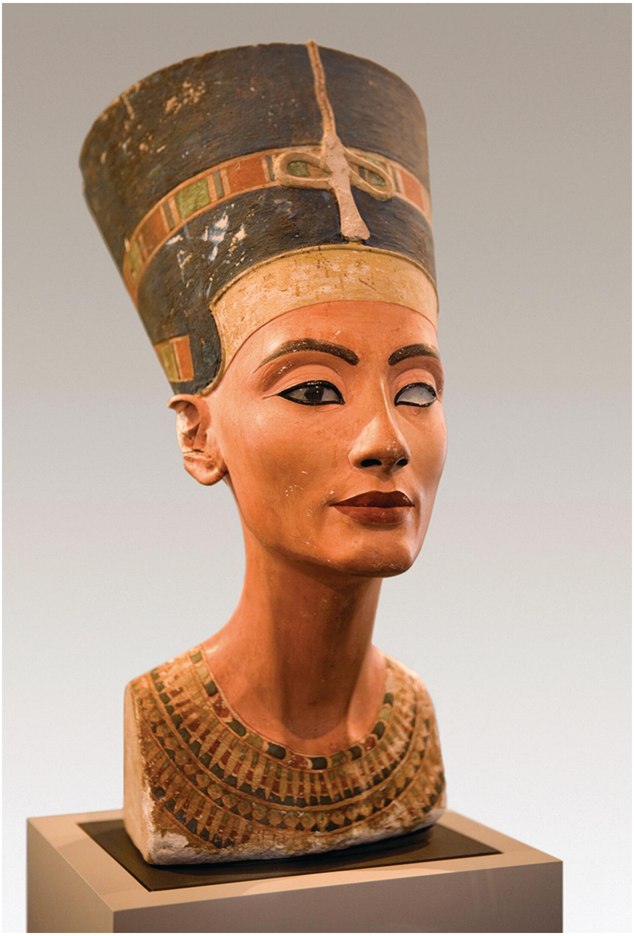

Plate 8.4 Painted limestone bust of Queen Nefertiti, found in the studio of the sculptor Thutmose at Tell el-Amarna.

Source: Mike P. Shepherd/Alamy.

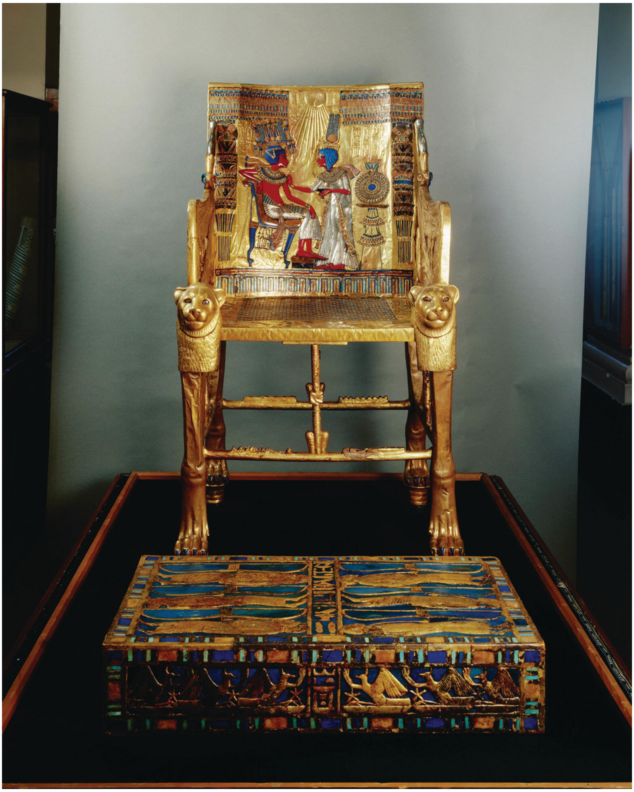

Plate 8.5 Decorated, gold-covered throne and footrest of Tutankhamen.

Source: © Sandro Vannini/CORBIS.

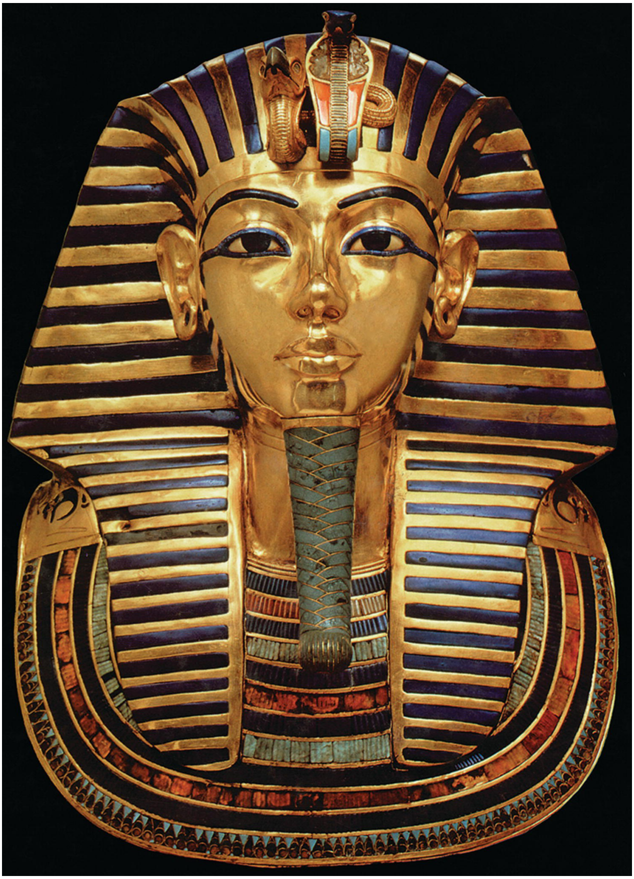

Plate 8.6 Tutankhamen's inlaid gold mask.

Source: Jürgen Liepe.

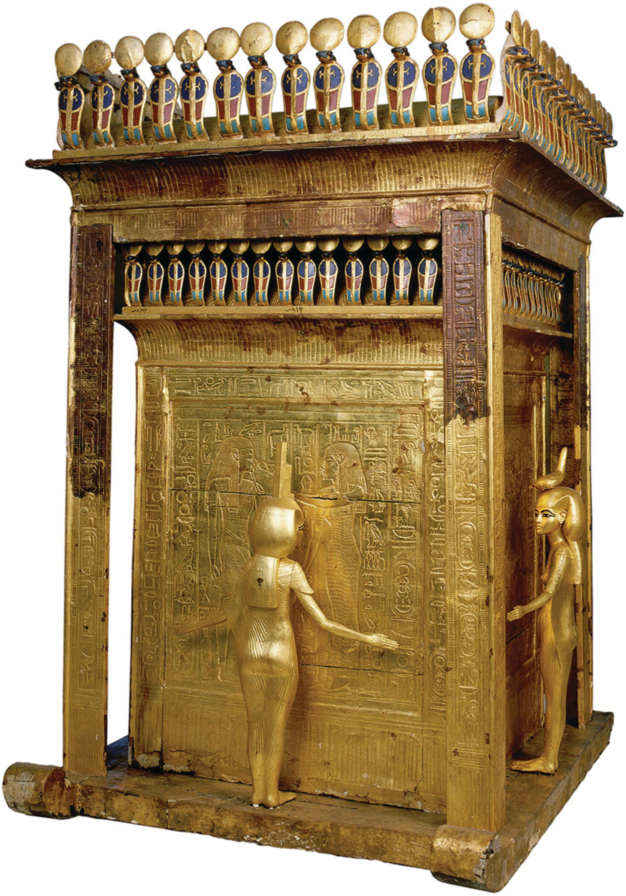

Plate 8.7 Gold shrine of Tutankhamen’s canopic containers, from his tomb’s Treasury.

Source: © CULTNAT, Dist. RMN/Ayman Khoury.

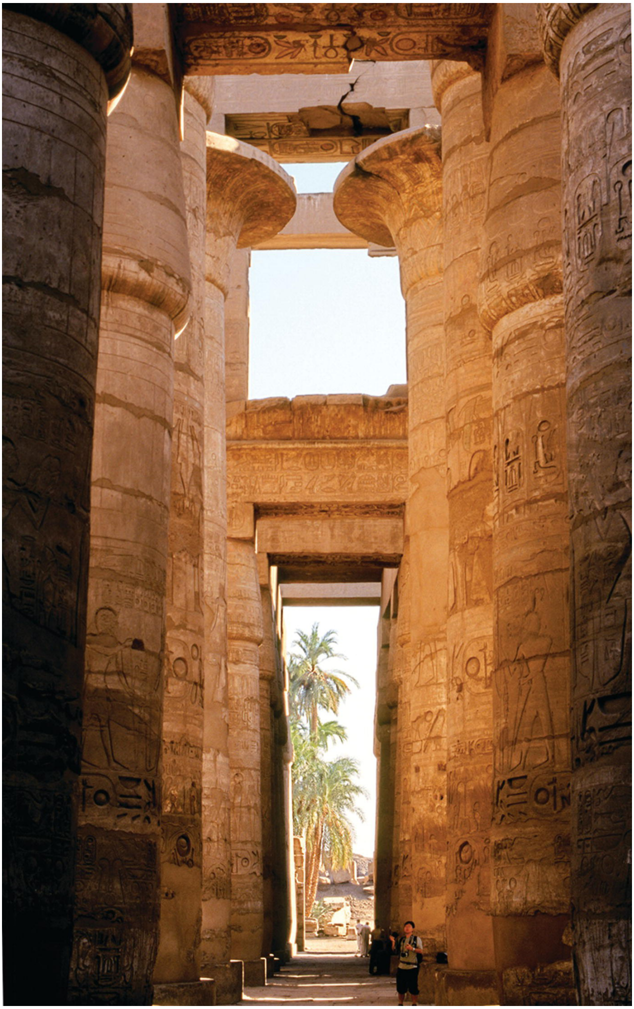

Plate 8.8 The Hypostyle Hall of the Temple of Karnak.

Source: bygonetimes/Alamy.

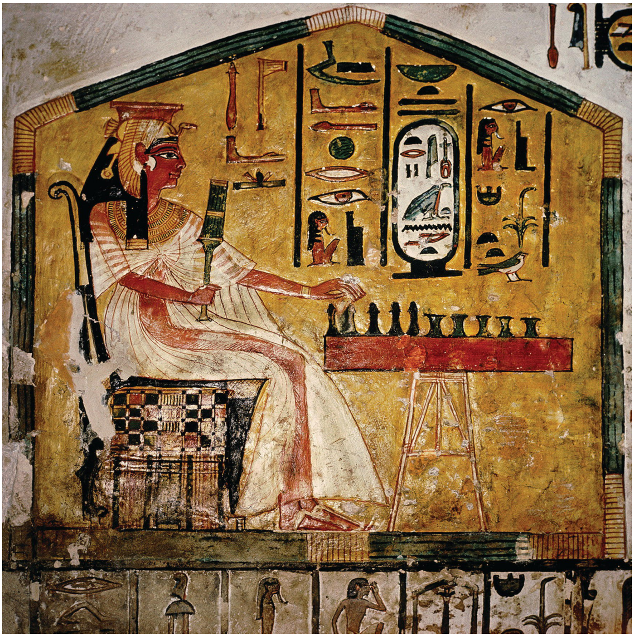

Plate 8.9 Painted scene from the 19th-Dynasty tomb of Queen Nefertari in the Valley of the Queens.

Source: Werner Forman Archive/E. Strouhal.

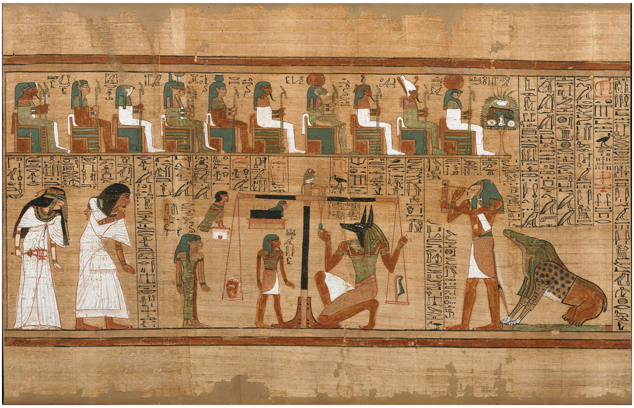

Plate 8.10 Papyrus from the Book of the Dead of Any, ca. 1275 BC (19th Dynasty).

Source: © The Trustees of the British Museum.

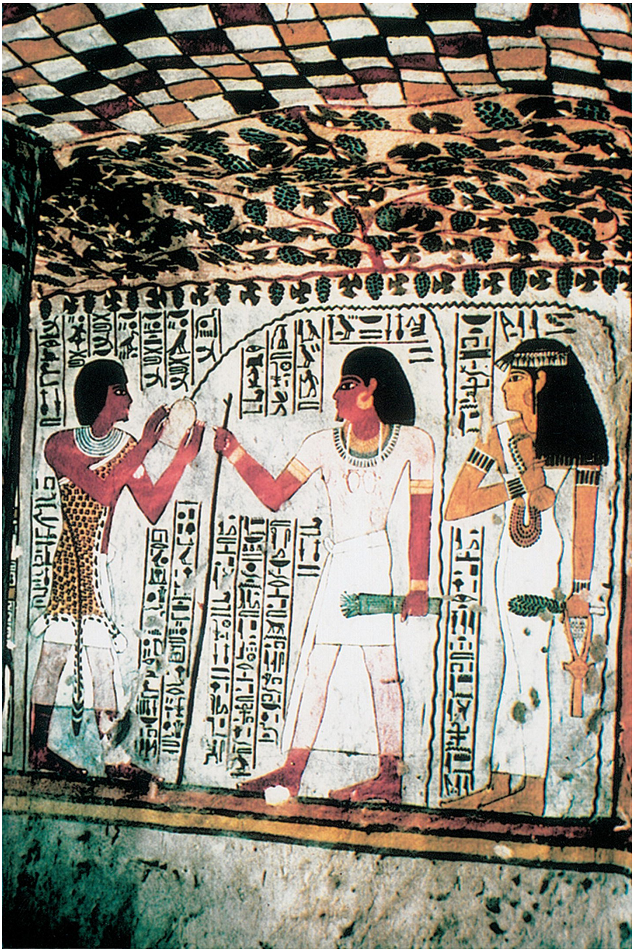

Plate 8.11 Painted scene of purification rites from the 18th-Dynasty tomb of Sennefer depicting Sennefer and his wife before a *wab*-priest.

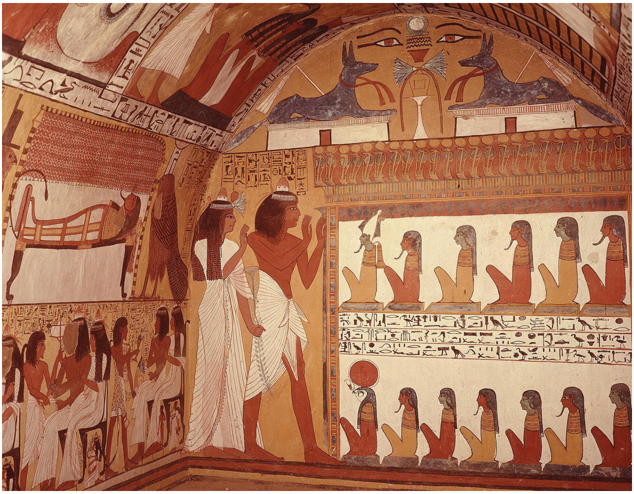

Plate 8.12 View of the 19th-Dynasty painted tomb of Sennedjem and his family at Deir el-Medina.

Source: The Art Archive/Gianni Dagli Orti.

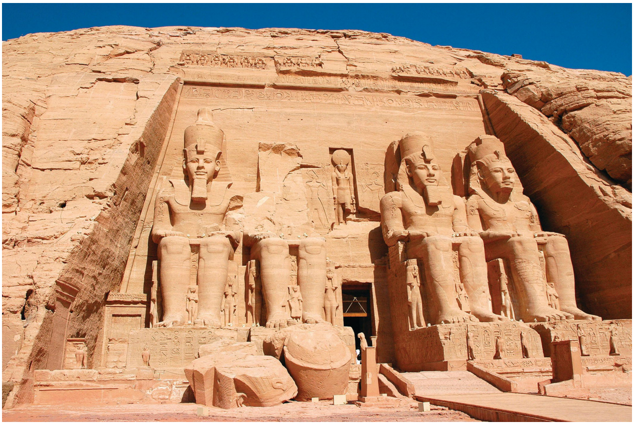

Plate 8.13 Rameses II’s rock-cut temple at Abu Simbel in Lower Nubia.

Source: Universal Images Group/SuperStock.

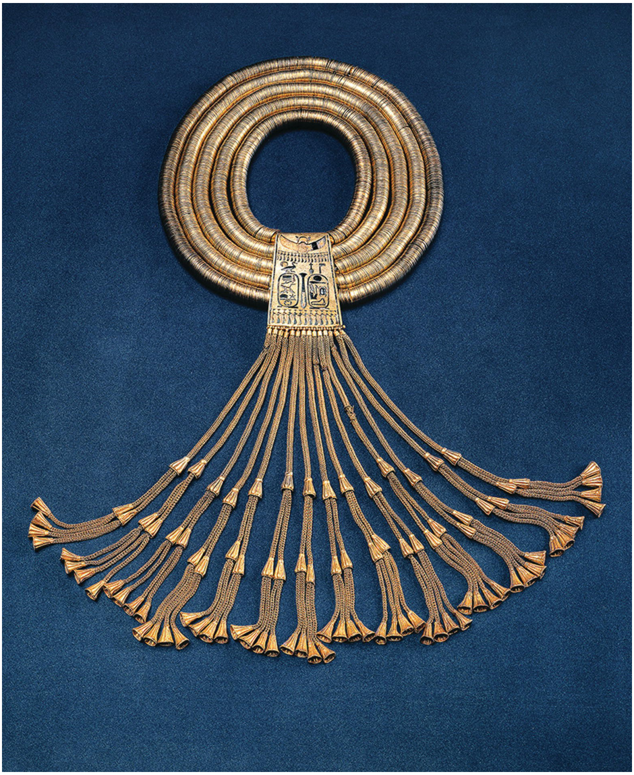

Plate 9.1 Gold necklace of King Psusennes I, from his tomb at Tanis.

Source: Jürgen Liepe.

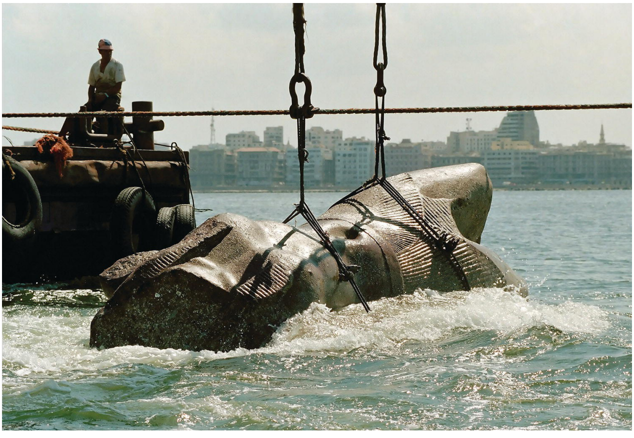

Plate 10.1 Royal statue excavated in Alexandria harbor.

Source: © Stephane Compoint.

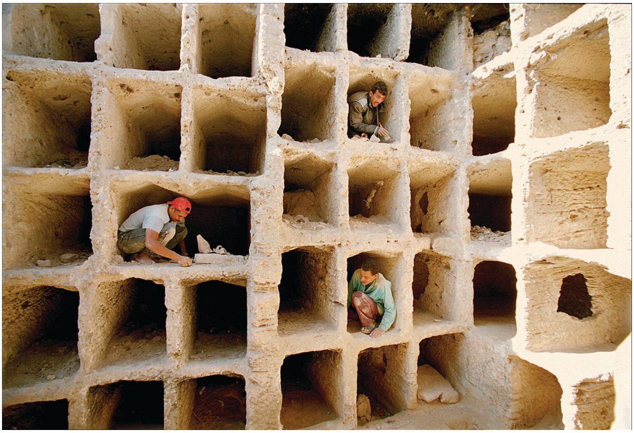

Plate 10.2 Rock-cut graves in the Gabbari district necropolis, Alexandria. Low-angle shot of the upper levels of the loculi in burial chamber I.

Source: © Stephane Compoint.

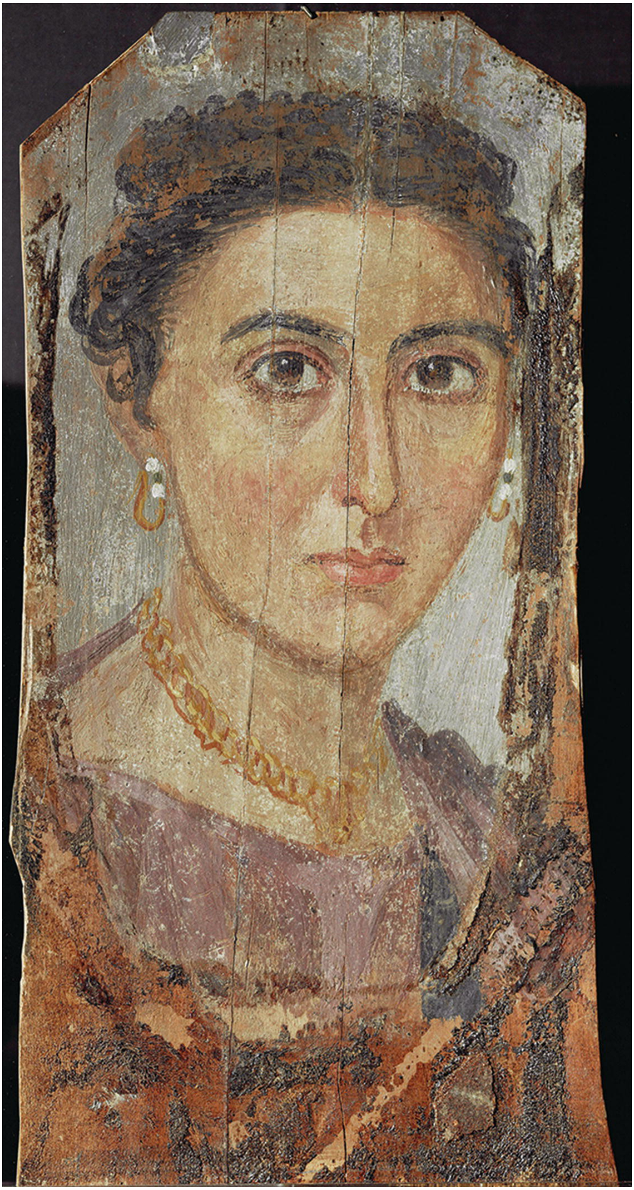

Plate 10.3 A mid-2nd-century AD mummy portrait of a woman, from the Faiyum, Kunsthistorisches Museum, Vienna.

Source: akg-images/Erich Lessing.

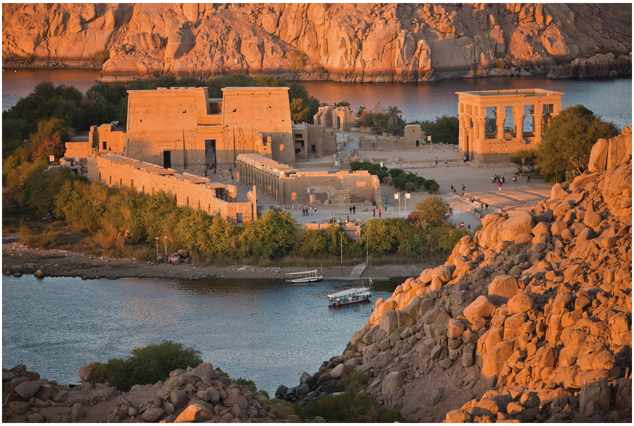

Plate 10.4 View of the Temple of Philae from the Nile.

Source: © George Steinmetz/Corbis.

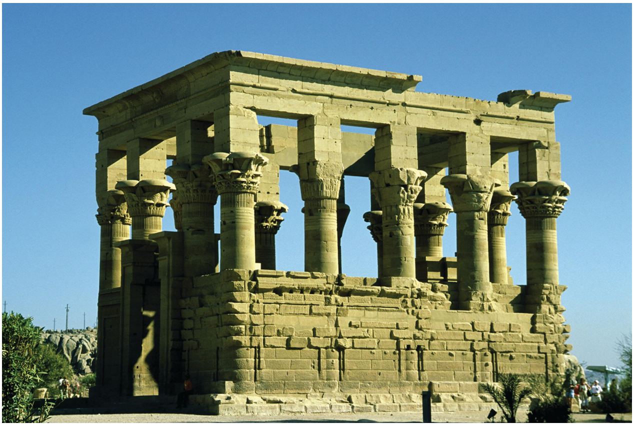

Plate 10.5 Kiosk of Trajan, Temple of Philae.

Source: Tibor Bognar/Alamy.

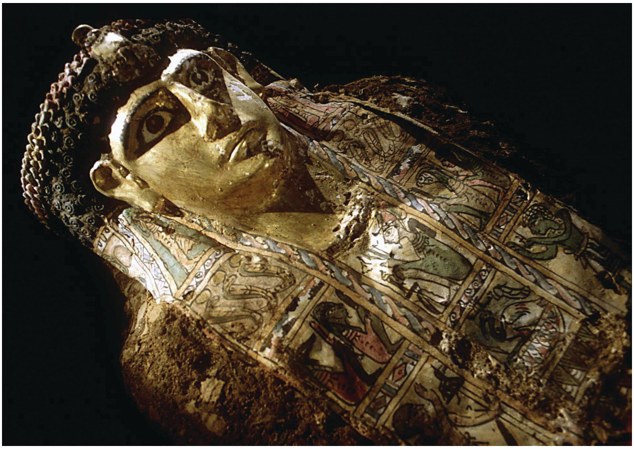

Plate 10.6 A gilded, Roman Period mummy from the “Valley of the Golden Mummies” in Bahariya Oasis.

Source: © Reuters/CORBIS.

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